



GOVERNMENT OF KERALA

FOURTH FIVE YEAR PLAN

1969-74

STATE PLANNING BOARD
TRIVANDRUM

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PREFACE

We have completed nearly two decades of economic planning in India. Economic planning, properly defined, is essentially a method of organisation and utilisation of resources to the maximum advantage in terms of defined social ends. This involves making of major economic decisions of what and how much is to be produced and to whom it is to be distributed on the basis of a conscious and pre-determined choice by a rational society. Planning is thus a total social process the success of which essentially depends on the political and social organisation and the value system supported by it.

2. Unfortunately, in India the situation is not exactly congenial to rapid development and social change. Loyalties of large groups of our people are very often to feudal associations and symbols. Political and economic decisions cannot be taken always on rational grounds. Consequently, the process of development is hampered at every stage by outmoded social institutions and habits of thought which they instil in the masses of people. All this has to be overcome. And that is not an easy task. But unless this task is accomplished, there is little meaning in talking of economic planning and development.

3. There is no doubt that India has made some advance. But it is insignificant when compared to the rapid strides made by other countries. Over the last century, per capita income in India changed little. At the beginning of the nineteenth century the per capita level of living in the major European countries was not much higher than in India. The progress of technology and science and the consequential adaptation of society and value systems which left little social lag helped to boost industrial production and saving. This in turn, laid the foundation for a rapid rise in the levels of living in Europe. While most of the industrialised countries attained an annual rate of growth of about 2 per cent in per capita output during the period of a century and a half, the real level of per

capita output in India actually fell. The point to note is that the wide disparity between the industrialised countries and India appeared only in the last century and not before.

4. In the recent times, there has occurred an unparalleled and rapid economic growth in many countries of the world. Germany, Japan, France and Italy in the capitalist world have attained an annual average growth rate of 6 to 10 per cent. Socialist world of Eastern Europe, Soviet Union and China are also making even more striking advances. In consequence the gap between developed countries and India is growing fast and not getting narrowed. The task of planning is to reverse this tendency which unfortunately is not yet in sight.

5. The Fourth Plan has only targeted for an overall rate of growth of 5 per cent per annum. By the end of this century, this comparative low momentum can at best take us to the levels of living Latin America has already attained today. This clearly is not a prospect which a nation of our resources and history could be proud of.

6. Speaking objectively and historically, we should be blamed for timidity if we cannot plan for an annual rate of growth of ten per cent. The task, would then be to work out the policy instruments that would ensure the attainment of this high speed. High rates of growth are taken for granted in most of the socialist countries. West Germany and Japan in the capitalist world are other examples. In the light of this experience, the feasibility of a high growth rate can no longer be dismissed as a fantasy.

7. If this is the all India prospect, the Kerala picture is much more disturbing. Kerala hopes to bridge the gap between the per capita income in the State and that at the all India level in a period of fifteen years! National planning will have meaning only if it strives to ensure equal level of economic development and welfare to all constituent States in the Union. Backward States like Kerala should get a greater share of the plan outlay till they catch up with the more advanced States. The above principle does not seem to receive adequate attention in the allocation of central sector schemes to the State. The Central Government and the

Planning Commission may do well to review their allocation policy before any more damage is done in the sphere of Centre-State relations.

8. Employment situation in the State and the pressure on employment opportunities by the educated category of unemployed is mounting. Delay is dangerous. Rapid industrialisation of the State aimed at fuller utilisation of both natural resources and man-power potential is the only solution. This would involve huge investments. Employment generation depends on the scale and tempo of overall economic development. The State Plan of Rs. 258 crores is much too small to make any visible impact on the arrested development of the State's economy in the past.

9. In a changing society there is need for a purposive transmutation of social energy into each and every one of its parts. This largely is a question of decentralisation and enlivening of bureaucracy. Impersonalisation and transfer of personal services from primary groups to well-knit organisations are involved in this. The growth of objectivity in bureaucracy and the rise in the standard of its efficiency has to be aimed at through the process of blending attitudes to the needs of new institutions. A new conception of bureaucracy has to be evolved carefully with a view to continue the two principles of efficient administration and competition. Special bodies are to be set up to represent authority and to apply sanctions at all strategic points of our social and economic life. A special machinery for controlling controls has to be invented. Planning is in short the emergence of the idea of controlling all the controls. The bureaucrat of this new type should be different from his counterpart today who does not make decisions. The latter executes orders and is only an agent. This must change. The new bureaucrat has to be immediately connected with decision making. The process of decision making must be the result of a cross fertilisation of different levels of administrative and political intelligentsia. Bold criticism and group leadership should inform this process which alone can eliminate waste, speed up work and produce innovations. The bureaucracy which necessarily should form the backbone of the growing administrative system will have to overcome enormous difficulties connected with the necessity of simultaneously solving the problems of creating a heavy industrial

base, of developing light industries, of reconstructing agriculture and of improving the material conditions of the masses of people in the towns and country-side. He cannot perform this task unless he enjoys a certain degree of prestige among the people. But today the effectiveness of the bureaucrat has been materially reduced because he does not any longer enjoy a position of prestige and respect as before. In season and out of season, he has been decried for his alleged failures to adapt himself to altered circumstances. There is a tendency in the political leadership in this country to disown its responsibility. In the process there is rarely any appreciation of good work done and even more rare is punishment for inefficiency and slackness. Thus a whole series of sociological, political and economic factors have combined to produce a steady deterioration in the quality of administration. Inevitably a majority of civil servants just 'carry on' waiting for some one higher up to give the word for action. The result is the slowing down of the administrative machinery and a total loss of all sense of urgency. Such a situation definitely is not conducive to learning and doing, nor for integrity and thoroughness. The willingness to assume responsibility which is 'the most crucial single qualification' of a good administrator is the first casualty in the present system. Sociologically this courage to face facts oneself, to find solutions for problems and to breed self confidence has to be attributed, among other things, to a deep and informed involvement of the individual to the socio-psychological context in which he operates. Hence it will not be far wrong if we say that the success of the administrative machinery will largely depend on the historical correctness of the organisational pattern and ideology directing our path towards a democratic and socialist society.

Trivandrum,
23-7-1970.

C. ACHUTHA MENON,
Chief Minister.

CHAPTER 1

AN APPROACH TO THE FOURTH FIVE YEAR PLAN

The approach to the Fourth Five Year Plan is determined by the objectives pursued and the priorities chosen. Economic planning in developing countries has its rationale in the universal craving for rapid development which alone ensures rising living standards. In the ultimate analysis acceleration of growth subsumes enhancement of productive capacity. The pre-occupation with growth, however, has in recent years been conditioned by a concern for socialist objectives and values. The socialistic pattern of society implies that economic policy and institutional changes have to be planned in a manner that would secure economic advance along democratic and egalitarian lines. No effective steps have however been taken towards the socialistic transformation of the society till recently, though the public sector witnessed substantial expansion in the plan era. In consequence many of the imperfections of the laissez-faire economy persisted. An important measure towards socialism adopted recently has been the nationalisation of fourteen major banks in the country. The real advantages of even this measure will depend on the follow up action to be taken in the coming years. Acceleration of the pace of development is increasingly required to be re-oriented towards establishment of social justice. Despite the variegated and often conflicting associations enveloping the planning process in India, the concept of socialist pattern of society has led to a consensus on some vital implications:

- (a) social gain replaces clearly private profit as the motor and governor of major economic decisions;
- (b) basic decisions regarding production and investment are taken by agencies informed by social purpose; and
- (c) the pursuit of laissez-faire economic policy and the maintenance of traditional property relations have led to concentration of income, wealth and economic power as also widening inequalities of opportunities. Further the conscious and concerted attempts made to speed up development have resulted in the accrual of benefits of growth to strategically positioned classes of people. Socio-economic institutions therefore need to be re-structured and a process of development charted with a view to ensuring the involvement of the under-privileged sections of the community in the programme of development.

1.2 The approach to the Fourth Five Year Plan has also to be envisaged in the backdrop of the target and achievements of the first three Plans. Across the two decades of planned development the economy of Kerala State remained relatively stagnant and the major economic problems retained their intractability. Actually no significant attempts were made by way of developing or exploiting human and material resources during the First Plan. While industrial development was totally neglected, little impression was sought to be made on agricultural economy, even as large investments on infrastructure developments like irrigation was made in several favoured regions of other States. The figures relating to total outlay and achievement (Rs 30 crores and Rs 25.87 crores respectively) in the First Plan clearly indicate the inadequacy of development efforts undertaken in the First Plan period.

1.3 Despite the substantially increased outlay of Rs 87 crores, the crucial sectors of the economy like agriculture and industry limped through a state of arrested development during the Second Plan. The Plan outlay on large and medium industries during the first two Plans was limited to Rs 1.27 crores; the achievement in respect of the generation of electricity was only 1.48 lakh K.W. against the target of 2.41 lakh K.W. These bring out vividly the inadequacies and failures of economic planning in the decade 1951-1961. The regional pattern of central investment in industries was not designed to strengthen the slender industrial base of Kerala. This is clear from the fact that out of a total industrial outlay of Rs. 653 crores in the Second Plan the amount invested in Kerala was less than a crore of rupees while several States like Orissa and West Bengal accounted for a quarter each of total Central investment on industries. Apart from the gross inadequacies in investment in strategic sectors the first two Plans also seem to have pampered the relatively non-priority sectors like social services which a backward economy could ill afford at the early stage of its development.

1.4 The Third Five Year Plan was substantially an improved exercise, in respect of both the scale and the content of developmental efforts. The financial targets which were more than twice as large as those of the Second Plan were overfulfilled. Crucial sectors like agriculture, irrigation, power and the industry received sizeable allocations. (vide Table I).

TABLE 1

Third Plan Targets and Achievements (State sector)

(Rs. lakhs)

Sector	Plan Outlay		Actual Expenditure		Excess/Shortfall	
	Third Plan target	Actual Provision made (1961-1966)	Actual (1961-1966)	Compared with target	Compared with actual provision	
(1)	(2)	(3)	(4)	(5)	(6)	
1. Agricultural Programmes	3171.70	2721.22	2585.96	(-) 585.74	(-) 135.26	
2. Co-operation and Community Development	1123.16	1056.95	1097.66	(-) 25.50	(+) 40.71	
3. Irrigation and Power	5919.00	7237.06	7634.58	(+) 1715.58	(+) 397.90	
4. Industry and Mining	1719.50	1572.92	1437.02	(-) 282.48	(-) 135.90	
5. Transport and Communications	1088.00	1124.36	1195.78	(+) 107.78	(+) 71.42	
6. Social Services	3826.44	4269.52	4170.29	(+) 343.85	(-) 99.23	
7. Miscellaneous	152.20	124.13	109.72	(-) 42.48	(-) 14.41	
GRAND TOTAL (1 to 7)	17000.00	18106.16	18231.01	(+) 1231.01	(+) 124.85	

1.5 Perhaps the most outstanding achievement of economic planning in Kerala during the last 18 years was the unparalleled extension in the total installed capacity for generating hydro-electric power—from 18.5 M.W. to 546.5 M.W. With the commissioning of Iddikki Project (started in 1968 and estimated to add an equivalent capacity) the State will soon face the problem of the disposal of surplus energy.

1.6 In the field of large and medium industries the Third Plan held forth lofty promises. The Centre itself approved the setting up of industrial projects in Kerala estimated to cost Rs. 71 crores. Though the actual outlay was considerably smaller at Rs. 49.2 crores, the foundation of quite a few industrial enterprises was laid during this period.

1.7 The major share of investment was on account of the Cochin Oil Refinery (Rs. 30 crores), the F.A.C.T.—third stage expansion—(Rs. 11 crores) and the H. M. T., Kalamassery (Rs. 7 crores). Considerable progress has been made in respect of the Cochin Fertilizers, another major industrial enterprise.

1.8 The special role and significance of small industries in an economy, which faces several constraints to spontaneous growth of large industries and which experiences severe pressure on employment opportunities, were adequately appreciated in the Third Plan. In the Second and Third Plans substantial efforts were made to provide technical assistance, credit and other facilities. At the end of the Third Plan more than 3,000 small units employing about 30,000 persons had been registered. It would clearly be necessary to maintain the tempo of development of small industries.

1.9 In spite of the continuance and aggravation of food shortage and the inadequacy of other agricultural products due to natural hazards in several years of the Third Plan period, agricultural economy in Kerala achieved a break-through as elsewhere, thanks to the remarkable advances in farming technology and the increased provision of modern inputs. The adoption of superior seeds and the substitution of chemical inputs for organic manure as also progressive mechanisation forged ahead in the closing years of this decade. The consummation of this process was found in the increased rice output from 10.68 lakh tonnes in 1960-61 to 12.5 lakh tonnes in 1968-69.

1.10 The social milieu of the Travancore-Cochin region was conducive to the concentration of outlay on social services—education and health—to the neglect of building up material capital. In the context of Kerala's educational system, legitimate doubts may be raised about such colossal expenditure leading to a commensurate development of human capital. All the same, there occurred something like an educational explosion in the plan period. In the

first eight years of this decade the total annual expenditure on education rose from Rs 18 crores to Rs 41 crores and the outlay on higher education nearly trebled itself. During the Third Plan period (1961-1966) the number of colleges for general and professional education rose from 82 to 142. This is perhaps not an unmixed blessing for two reasons: (i) the faster development of the services sector aggravates the existing imbalances; (ii) the problem of educated unemployed, already chronic, now assumes new and alarming dimensions.

The Salient Features of Kerala's Economy:

1.11 The universal urge for building up the socialist pattern of society needs to be the dominant consideration in the formulation of the Fourth Plan. In the preceding section an attempt was made to outline briefly the content and character of development efforts undertaken in the period of the three Plans. Available figures on regional income indicate that Kerala has one of the very low per capita incomes amongst the States. (vide Table 2).

TABLE 2
Per capita income of States (1964-65)
(Rs. at current prices)

1. Punjab	619
2. Maharashtra	529
3. Gujarat	523
4. Haryana	513
5. West Bengal	495
6. Andhra Pradesh	458
7. Mysore	441
8. Madras	436
INDIA	423
9. Assam	394
10. Kerala	391
11. Madhya Pradesh	378
12. Uttar Pradesh	374
13. Orissa	368
14. Rajasthan	365
15. Bihar	292

1.12 During the period 1960-61 to 1967-68 the average annual rate of growth of income in Kerala was 3.1% as against 2.6% for all India. During the same period the per capita income rose at an average

rate of 1.1% per annum in Kerala and 0.5% in India as a whole. The lower growth rate at the all India level during this period was mainly due to the fall in the agricultural production as a result of drought which affected Kerala with much less severity than other parts of India. It has to be noted that despite the recession caused by the set back in agricultural output, the growth rate in industries was higher at the all India level than in Kerala.

1.13 The substantially enlarged outlay and the financial overfulfilment of the Third Plan hardly touched the fringe of the major economic problems of the State and left the crust of its backwardness uncracked. The over-riding considerations in the formulation of the Fourth Plan should, therefore, be the designing of a purposeful endeavour on a large scale to tackle the crucial problems of the State and cut at the root of economic backwardness. Rapid industrialisation should be given the top priority for various reasons.

(i) There is little scope for development in the agricultural sector, practically the whole of cultivable land has been brought under the plough and the man-land ratio in Kerala is the lowest for any State in India. Industrial development is thus the only alternative left, whichever way we look at it—enhancing employment opportunities, increasing productivity or raising living standards.

(ii) Industrialisation has long been neglected in Kerala. Though the industrial sector employs a higher proportion of the total working force, the industrial concerns are mostly agro-based, technologically backward and of low productivity. In respect of both the invested capital and the daily earnings per worker, Kerala lags far behind all India. The average daily earnings of a factory worker in Kerala is only Rs 4.75 compared to the all India average of Rs 7.15.

(iii) Promotion of industries with linkage and spread effects appears to be the only feasible method of augmenting production and self-sustaining employment opportunities.

(iv) Lack of indigenous investible capital is at once the cause and the effect of tardy industrialisation. Industrial enterprises sponsored by or in collaboration with State agencies and entrepreneurs from both inside and outside the State alone can develop an industrial base which will eventually generate the capital resources for further growth.

1.14 All these indicate the imperative need for a large scale and concerted endeavour on the part of the State to extend its industrial activities and tone up the performance of the public sector with a view to increasing the investible surplus. The scope for more extensive collaboration with external agencies on acceptable terms needs to be explored.

1.15 It may be useful to select certain enterprises to spear point the process of general economic development. Promotion of fisheries development is known to hold forth immense potentialities and in recent times some progress has been achieved in mechanisation and modernisation of fishing techniques. The almost inexhaustible resources, the extensive and ever-growing world market for marine products and the high yield of the units of inputs render fisheries an ideal sector of development for Kerala. A Master Plan has already been prepared for fisheries development and this needs to be implemented with maximum expedition so that this may serve as a lever of general development of Kerala's economy.

1.16 Intensification of efforts is also called for in the sector of small industries. Here again, some work is already done. The range of operation needs to be extended considerably. The Rural Industries Project, Kozhikode, has demonstrated the limitless potentialities in this regard. The constraints on the development of large and medium industries in Kerala are numerous and often insurmountable. The promotion of smaller industries which function as an ancillary to large industries and which can count on a steady market appears to be more feasible. Further, small industries can absorb a large number of the educated unemployed if they are properly assisted and duly encouraged to take advantage of them.

1.17 It is true that Kerala too was involved in the 'Green Revolution' that was ushered in in India during the close of this decade and significant achievements were recorded in the production of food crops and cash crops. All the same, the State continues to rely heavily on cereals supplied by other States to the extent of half the total requirements. While self-sufficiency in cereals may not be consistent with the optimum utilisation of Kerala's limited land resources (more than half the net area cultivated is used to grow more remunerative cash crops), it would be necessary to push up the adoption of improved agricultural practices with a view to narrowing the gap between the production and the requirements of food crops and also to ensure more economical operations in respect of commercial crops which have to be disposed of in progressively competitive world markets.

1.18 The I.A.D.P. and I.A.A.P. have done some useful work in the transformation of traditional agriculture during the last 6 to 7 years in five districts of the State. The bulk of the small farmers however continued to function outside the mainstream of modernisation. Co-operatives have not yet measured themselves upto the task of organising the backward and indigent farmers for collective farm operations. A suitable agency has to be evolved at the village level to bring together the apathetic farmers so as to operate common enterprises like the 'Yelah' Programme. In addition to building up the infra-structure like irrigation potential and stabilising agriculture,

far for greater attention will need to be paid to streamline the distribution of modern inputs like selected seeds, fertilisers, pesticides and improved implements as also extension of credit facilities, marketing arrangements, crop insurance and farm price support. Land relations have been in the melting pot for over a decade. The termination of all kinds of tenancy, the conferment of ownership rights to bonafide tillers of the soil, the rigid enforcement of land ceilings and distribution of land to the landless, should be pursued with maximum despatch as these provide the requisite motivation for undertaking efficient farming.

1.19 Economic planning connotes essentially the optimum use of the material and human resources so as to attain stipulated objectives in a defined time horizon. No attempt has been made hitherto to plan the use of land which, being the scarcest resource in Kerala, needs to be handled in the most economical manner. It would be clearly necessary to collect comprehensive data about the utilisation of land as also the factors that induce dynamic changes in the same with a view to laying down an optimum behaviour of land in respect of land use. In this connection reference may be made to three categories of resources which have for long been grossly unutilised.

(i) the forests of Kerala are known for the variety and quality of trees they abound in there is considerable scope for better preservation and use of them as also fuller utilisation of countless types of minor forest produces. Vast areas of land could be profitably used for growing new varieties like palms and eucalyptus. In respect of the Third Plan even as the allocation under this item was meagre, there was substantial shortfall in the actual expenditure incurred on forest development;

(ii) the State of Kerala has a unique constellation of rare mineral sands, ilmenite, rutile, monazite, the zircon and siliminite and china clay, the bulk of which is exported and therefore not subjected to sophisticated manufacturing processes;

(iii) the case for fishery development has already been cited. The moderate promotional efforts in this regard have produced striking results—Kerala which accounts for over 40% of the total marine products earned as much as 85% of the foreign exchange in respect of marine products and this rose from about Rs 2 crores to Rs 25 crores in the last 8 years. All the same, vast stretches of fishing grounds remain unexploited. The exploitation of off-shore waters lying beyond ten miles from the coast and modernisation of fishing crafts still leave much to be desired.

1.20 Planning in Kerala as in other States was oriented to the goal laid down in the Third Plan document that "measures for advancing the economic and social interests of weaker sections of society should be so intensified that they do in fact reach a level of well being comparable with other sections of the population".

The expenditure on welfare of backward classes at Rs. 255.20 lakhs during the Third Plan was, though substantial, a little less than the outlay (Rs. 257.6 lakhs) in the Second Plan. The axe fell mainly on educational facilities, economic uplift and housing. The proportion of scheduled castes and scheduled tribes population to the total in Kerala is only half the figure for India as a whole. All the same, studies undertaken in this regard show that the disparities between the living levels of backward and forward classes continue to be serious. While 70% of households of other classes own land only 47% of backward classes households possess land. Again nearly 60% of land holders among scheduled classes had holdings below 25 cents only while the comparative proportion was much lower—below 30%—in respect of other classes. The literacy rates for the two classes are today 68% and 47% respectively. In respect of household income while 11% of the forward classes earn more than Rs. 25 per member, only 4% of the scheduled households get the same earnings. The method and machinery for raising the living levels of the weaker sections of society need to be recorded through a generous distribution of land, provision of training and employment opportunities.

1.21 Planning for economic development is a function of financial, administrative, social and educational factors. The inter-connections of one to the others and vice-versa demand that planning in one sector has to be simultaneous with planning in others. The need for inter-sectoral balances ordains that there should be simultaneous development in all sectors since the output of one sector is the input in other sectors. Agriculture, industry, trade, administration as also the several cultural activities are all dependent for their content and direction of growth on the qualitative and quantitative planning in the field of education. In the Fourth Plan it is proposed to give a vocational and professional bias to education.

CHAPTER II

AIMS AND OBJECTIVES

The Planning Commission, Government of India, have laid down the following objectives for the Fourth Five Year Plan.

1. Attainment of growth with stability through building up of buffer stocks of major agricultural commodities;
2. An overall rate of growth of 5 to 6 per cent (compound) per annum;
3. Reducing foreign aid to half the present level;
4. Raising of exports by about 7 per cent per annum by increasing the exports of both traditional and non-traditional commodities;
5. Mobilisation of additional domestic resources to the extent of Rs. 200-300 crores per annum.

2.2 The strategy of development of each State, while conforming to the broad national objectives, will have to take account of its special problems, needs and potentialities. Planning at State level in this context moves beyond the apportionment of resources and targets provided in the National Plan.

2.3 Keeping in view the national goals and the special features of the State's economy the following broad objectives have been laid down for Kerala's Fourth Plan.

1. to reduce the gap between the per-capita income in Kerala and that at the all India level so as to catch up with the all India average within a period of fifteen years;
2. to attain self-reliance in food by increasing rice production through intensive cultivation and institutional changes;
3. to terminate tenancy and vest full ownership rights in the real tillers of the soil;
4. to provide employment to the addition to the labour force during the Plan period and make a dent on the unemployment problem by stabilising existing employment and creating new avenues of employment;
5. to reduce regional disparity in economic development within the State;

6. to ensure that the poor and vulnerable sections of the community such as landless agricultural labour, low paid employees, small peasants, backward communities and scheduled castes and tribes get an increasing share in the fruits of planned development consistent with social justice.

Raising the per-capita income:

2.4 The Third and Fourth Five Year Plans have underlined the need for reducing regional disparities in income within the country. Kerala ranks very low in the per-capita income of the people. The State's per-capita income in 1964-1965 was only Rs. 391 as against Rs. 423 for all India. National Planning will have meaning only if it strives to ensure equal level of economic development and welfare to all the constituent units in the Indian Union. It is therefore imperative that the backward regions and States get a greater share of the plan outlay till they catch up with the more advanced States.

2.5 The above principle, however, did not receive adequate attention in formulating the first and second plans. This has led to a widening of the disparities in the level of development between the advanced States and the backward ones. Consequently greater effort is now needed to rectify the disparity and, in view of the paucity of resources, it may also take a longer time.

2.6 The revised basis for allocation of investment outlays to the States followed in the Fourth Plan takes into account the regional disparity in income. If this is backed up by a discreet policy of industrialisation and allotment of funds under the Central Sector Plan it may lead to substantial reduction in the gap in development between Kerala and the economically advanced States. The State also will contribute its mite to speeding up this process. It is hoped that the per-capita income of the State will rise to the same level as the all India average within the next fifteen years of Planning. The attainment of this goal will, however, depend largely on the policy adopted by the Centre in this regard.

Self-reliance in the matter of Food:

2.7 Apart from the general economic backwardness of the State the most urgent problem calling for immediate solution is the large deficit in foodgrains. In 1967-68 Kerala produced only 11.24 lakh tonnes of rice from which the quantity available for consumption was 10.12 lakh tonnes as against the requirement of 22.56 lakh tonnes, the deficit being 55%. The dangers of allowing such a large deficit in the staple food of the people to persist are quite obvious. It is therefore accepted as one of the major objectives of the Fourth Plan to narrow down this gap to the minimum, if not bridge it completely by the end of the Fourth Plan period.

2.8 Recent advances in the field of research and technology within the country have proved beyond doubt the potentialities of intensive cultivation as holding the key to self-sufficiency in food and other agricultural products. For Kerala, faced with a deficit to the tune of 50%, self-sufficiency in food appeared a far cry a few years ago but to-day, with the advent of the miracle seeds capable of yielding two to three times as much as the traditional ones, it is quite within the range of feasibility. There are already intensive agricultural programmes like the I.A.D.P. and I.A.A.P. under implementation. These programmes, however, have not been a complete success. Probes into the reason for their limited success have revealed the lack of a proper organisational and institutional set up conducive to rapid spread and effective adoption of modern techniques of production in agriculture. This problem is sought to be solved in the Fourth Plan by organising intensive cultivation of paddy at the 'Ela' level and by ensuring agricultural credit on easy terms to the ryots, especially to the small peasants.

2.9 The programme for intensive rice cultivation indicated above, along with infra-structural developments like extension of irrigation and land development measures envisaged in the Plan would be capable of almost doubling the output of rice and wiping out the deficit in foodgrains. However, a modest target of reducing the deficit to about 30% of the requirements is set for the Fourth Plan.

Reduction of regional disparity within the State:

2.10 Disparities in development among the different areas within the State deserve as much attention as regional disparities within the country. There are certain backward taluks especially in the Malabar area which have to be given a special treatment in the allocation of development funds. The State is already seized of the urgency of remedying this situation and has been striving towards this in the past years of planning. The efforts to identify such pockets of backwardness and developing them on a priority basis will continue in the Fourth Plan also.

Ensuring the fruits of development to the Poor:

2.11 There is a wide-spread feeling that the fruits of planned development go largely to the privileged classes of the society, though this has never been anticipated by the planners in India. Though committed to socialism as a national goal, the vulnerable sections of the population do not seem to have benefitted from the impressive development of the economy as much as the privileged classes who continue to retain their class position and exploit the opportunities created by planning to enlarge their ownership control of the productive assets in the economy leading to the growth of monopolies.

This is a tendency which has to be fought at all costs. The Fourth Plan provides for special schemes to increase the welfare of the scheduled and backward communities, landless agricultural labour, low paid employees and the small peasants.

Employment to additional labour force:

2.12 An unemployment survey conducted in Kerala in 1965 showed that there were 5.5 lakhs of totally unemployed persons besides a much larger number who were under-employed. The situation has worsened during the last four years owing to the increase in labour force. The Fourth Plan therefore, starts with a back-log of unemployment estimated at 7 lakhs. New entrants to the labour force during the Fourth Plan period will be of the order of 9 lakhs. The objective of the Fourth Plan is to avoid a worsening of the situation by creating new avenues of employment to absorb the increase in labour force over the Plan period. This is to be achieved mainly through setting up a large number of modern small scale industries. Other programme like rural works, development of mineral resources and development of large and medium industries both in the public and the private sector would also help in mitigating unemployment.

2.13 Other problems vitiating the sphere of employment in the State are under-employment in the rural sector and under-paid employment with the constant threat of disemployment in the major traditional industries like coir and cashew. Stabilisation of employment in these fields would mean creation of seasonal or part-time employment to the under-employed and making employment in the traditional industries, more remunerative and secure. The State's programme of rehabilitating the traditional industries and of rural industrialisation are intended to achieve the above goal.

2.14 In our economy the stock of capital goods available is not sufficient to employ the total available labour force on the basis of modern techniques of production. In consequence, two alternatives are open to such an economy. One alternative is employment of the available labour force on the basis of a backward and low income yielding technique of production. This implies low productivity of labour and low per capita real income. The other alternative is the adoption of more advanced techniques of production and higher productivity of labour. This implies however unemployment or under-employment of part of the labour force because the capital goods available do not suffice to employ the whole labour force on the basis of modern techniques of production. The failure to utilise fully the labour force leads to low per capita regional income. Both situations are found in our economy. The first prevails in our indigenous industries where the capitalist mode

of production has not yet entered. The second exists in all our modern factory production as well as in agriculture where individual peasant production is replaced by the capitalist plantation system. The latter situation where capital outfit must increase sufficiently to make possible full employment with a value corresponding to modern techniques of production has to be preferred. This requires capital accumulation. Only the road of capital accumulation leads the economy out of its state of under development. The essential problem for us, therefore, consists in capital formation being insufficient to make the capital outfit increase to the required level within a reasonably short-time. In consequence of the low productivity of labour, the surplus of national income over what is needed for the production of the labour force is small. This, however, is not the most important obstacle to capital accumulation. The fundamental obstacle is the fact that such economic surplus as is available is not fully utilised for capital accumulation in our economy. The feudal and commercial upper class who should have developed into our nation-building entrepreneurial class of savers unfortunately tied up in the false values of a decaying social order, use the small surplus produced for conspicuous consumption, i.e., for unproductive purposes.

2.15 It is possible to take either a static or dynamic point of view regarding employment technology. The static point of view treats the ratio of the working force in different sectors of employment as unalterable and distributes the net annual addition to the labour force according to the existing ratios. This freezes the existing balances in society and views employment mainly in terms of bread alone. The dynamic view, on the other hand, posits continuous planning in a wide time horizon which views employment as shifting workers from low material output to higher outputs. An analysis of investment per person in Kerala's small scale industries has helped to high-light some significant problems. The theory of factor-costing seems to be holding its ground with us still. In Kerala, with large scale disguised unemployment, the theory would hold that the opportunity cost of labour is nil, though the wages have to be equal at least to the level of subsistence. According to this theory there is even a case for valuing labour at less than its wages cost in an economy with surplus labour. "It is then (when there is surplus labour) arguable that the real cost of using labour in cottage industry is zero whereas factory production uses scarce capital and supervisory skills". There is a concealed confusion in the whole controversy which has to be cleared up. The confusion is between the rate of surplus and the rate of net income flow. The concept of opportunity cost is valid for income measurements but not for estimating the rate of growth. What is legitimate for considerations of economic growth is the rate of surplus of production over immediate consumption.

2.16 We desire the highest possible long-term rate of growth of our economy, consistent with certain minimum requirements of consumption. The rate of growth depends on the magnitude of the additional investible surplus which depends on the difference between the value created by the worker and his consumption. Given the investible fund and also the standard wage rate for a desirable level of consumption, proper utilisation of the scarce investible resources means that investments should be so channelled as to create maximum possible economic surplus. Investments are broadly of two kinds: (1) that which employs a technique that yields higher surplus per worker but less employment; (2) that which employs a technique that yields lower surplus but greater employment. Obviously the techniques having negative surplus effect are wasteful and hence become indefensible.

CHAPTER III

PLAN IN OUTLINE

A total outlay of Rs. 258.40 crores is envisaged in the Fourth Plan of the State. The outlays proposed under each head of development are shown in the statements which follow:

2. The nationalisation of banks and the creation of a number of Development Agencies and Financial Institutions mark a great departure in the pattern of devolution of resources to development schemes. Larger outlays through Public sector agencies like L.I.C., A.R.C., Indian Dairy Corporation, Rural Electrification Corporation and Housing and Urban Development Finance Corporation are now possible in agriculture, Rural Electrification, Water Supply and Housing. Revised estimates indicate that during the next four years it is possible to step up investments in certain crucial sectors of development through these new credit and financial institutions. This increase in resources, it may be noted, depends upon the formulation of viable and sound projects in these areas. The State Government has already formulated a large number of such projects which are awaiting scrutiny and approval by these agencies. The resources that will accrue through these development institutions will, to that extent, increase the size of the State's Fourth Plan.

FOURTH FIVE YEAR PLAN AT A GLANCE

State Plan Outlays

(Rs. in lakhs)

Sl. No.	Head of Development	Third Plan actual	Annual Plan 1966-67	Annual Plan 1967-68	Annual Plan 1968-69	Fourth Plan 1969-74
(1)	(2)	(3)	(4)	(5)	(9)	(7)
I. AGRICULTURAL PROGRAMMES						
1.1	Agricultural Production	1071.85	352.32	332.40	354.82	1700.00
1.2	Minor Irrigation	560.31	186.21	240.53	228.15	950.00
1.3	Soil Conservation	107.90	68.79	45.19	60.00	700.00
1.4	Animal Husbandry	176.25	57.79	57.06	70.79	353.50
1.5	Dairying & Milk Supply	84.78	33.19	19.29	17.22	131.50
1.6	Forests	210.52	45.70	82.40	89.00	446.00
1.7	Fisheries	334.01	179.63	251.62	270.15	1100.00
1.8	Warehousing & Marketing	20.81	1.40	2.36	2.98	23.00
Total—I		2566.40	924.43	1070.82	1093.98	5004.00
II. CO-OPERATION & COMMUNITY DEVELOPMENT						
2.1	Co-operation	201.80	29.46	29.68	39.90	200.00
2.5	Community Development	857.17	159.24	149.37	137.51	469.00
2.3	Panchayat Raj	46.06	5.13	7.78	20.00	100.00
Total—II		1105.03	193.83	186.83	197.41	769.00

(1)	(2)	(3)	(4)	(5)	(6)	(7)
III. IRRIGATION & POWER						
3.1	Irrigation	1029.21	307.54	235.31	397.38	2675.00
3.2	Flood Control	508.45	13.30	63.01	75.29	653.00
3.6	Power	6803.68	1454.82	1161.00	1550.00	7625.00
Total—III		7621.31	1775.66	1943.32	2022.67	10953.00
IV. INDUSTRY & MINING						
4.1	Large & Medium Industries	847.67	149.99	249.90	166.41	1200.00
4.2	Mineral Development	2.76	0.37	0.75	13.00	5.00
4.3	Village & Small Scale Industries	611.97	126.47	169.05	198.96	1007.00
4.4	Export & Imports	..	..	..	..	1.00
Total—IV		1462.40	276.83	419.70	378.37	2213.00
V. TRANSPORT & COMMUNICATIONS						
5.1	Road Development	1098.23	105.52	140.93	225.05	1025.00
5.2	Road Transport	..	100.00	59.00	60.00	650.00
5.3	Ports & Harbours	29.53	3.33	10.29	10.00	210.00
5.4	Other Transport	36.29	6.42	4.53	6.16	30.00
5.5	Tourism	22.60	5.07	8.40	8.72	50.00
Total—V		1186.65	220.34	223.15	310.03	1965.00

VI. SOCIAL SERVICES

6.1 General Education	1579.86	313.66	337.70	393.37	1661.25
6.2 Technical Education	385.62	44.42	60.82	65.08	225.00
6.3 Cultural Programmes	23.67	3.19	5.89	12.55	38.75
6.4 Health & Family Planning	1093.26	124.12	160.31	193.02	1050.00
6.5 Water Supply	465.29	99.30	141.20	222.70	1225.00
6.6 Housing	267.60	43.63	25.88	20.52	230.00
6.7 Urban Development	**	13.18	18.67	17.27	163.75
6.8 Welfare of Backward Classes	254.11	14.42	29.66	35.00	150.20
6.9 Social Welfare	40.72	4.39	7.84	9.37	51.80
6.10 Labour & Labour Welfare	81.08	19.25	18.57	24.82	90.00
Total—VI	4192.46	679.99	806.98	994.37	4885.75

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VII. MISCELLANEOUS

7.1 Statistics	14.72	3.47	2.61	3.73	12.00
7.2 Information & Publicity	7.96	1.76	1.95	5.00	18.00
7.3 Evaluation	**	**	0.20	0.30	5.00
7.4 Others	5.57	0.58	4.79	12.13	15.25
Total—VII	28.25	6.08	9.55	21.16	50.25
GRAND TOTAL	18162.53	4077.16	4620.35	5017.09	25840.00

CHAPTER IV

FINANCIAL RESOURCES

Resources mobilisation assumes a crucial role in a planned economy and the success of any plan depends on the manner and extent to which additional resources are raised. Mopping up of the economic surplus in the country and its fuller utilisation depends, to a large extent, however, on the degree of effective control which the Government and the financial authorities can exercise on the economic system and their success in manipulating the control mechanism.

4.2 The volume of savings generated in the private sector is much larger than in the public sector. The present estimate of the share of private sector in gross domestic savings is about 75 to 80 per cent. The generation of higher flow of resources in this sector and its diversion into preferred channels requires clever manipulation of various inducements and deterrents. If the requisite volume of resources are to be mobilised, it is necessary that the savings of the private sector are channelled more and more into the public coffers.

4.3 The aggregate financial requirements of the Fourth Five Year Plan of Kerala is of the order of Rs. 258.40 crores. The scheme of financing the Fourth Plan of Kerala is set out in Table I.

TABLE I
Estimates of financial resources for the Fourth Plan

	(Rs. crores)
(1)	(2)
I. State's budgetary resources at 1968-69 rates of taxes, electricity tariffs, bus fares etc., (excluding additional resource mobilisation and negotiated loans and state enterprises' market borrowings)	
1. Balance from current revenues (at 1968-69 rates of taxation)	—83.48
2. Loans from the public (net)	28.65
3. Share in small savings	10.00
4. Unfunded debt	17.25

	(1)	(2)
5. Miscellaneous capital receipts (net)		—94.92
6. Contribution of autonomous public enterprises:		
(i) State Electricity Board		+ 12.91
(ii) Road Transport Corporation		—15.73
Total I		—125.32*
II. Additional Resource mobilisation:		
(a) Measures adopted in 1969-70		11.00
(b) Deduct cost of concession in school fees		—7.70
(c) Net yield from 1969-70 measures		3.30
(d) 1970-71 measures (net yield)		24.00
(e) Measures to be adopted in subsequent years (net yield)		22.70
Total II (c) + (d) + (e)		50.00
III. Negotiated loans and State enterprises' market borrowings (gross):		
(i) State Government:		
(a) L.I.C. Loans		4.00
(b) R.B.I. Loans		1.00
(ii) State enterprises:		
(a) Market borrowings		13.40
(b) L.I.C. Loans		15.00
Total III		33.40
IV. Central Assistance:		175.00
V. Aggregate Resources for the IV Plan of the State (II + III + IV)		258.40

*This figure is the total gap of budgetary resources of the State during the Fourth Plan period. This gap can be ignored since there has been a general consensus among the State Government, the Government of India and the Planning Commission that it would be made good by some sort of special central assistance.

4.4 The total budgetary gap of the State Government (excluding additional resource mobilisation and negotiated loans and State enterprises' market borrowings) during the Fourth Plan period is estimated to be Rs 125.32 crores. This deficit has to be made good if a plan of any reasonable size for the period 1969-70 to 1973-74 is to be put through in Kerala.

4.5 The adverse balance in respect of current revenue (Rs. 83.48 crores) and miscellaneous capital receipts (Rs. 94.92 crores) and the loss on account of the operation expenses of the Road Transport Corporation (Rs. 15.73 crores) account for the above gap.

Balance from Current Revenues:

4.6 In the forecast of balance from current revenues (at 1968-69 rates of taxation) the amount is (—) Rs. 84.9 crores for the Five Year Plan period. In the original draft the corresponding figure was (—) Rs. 55.48 crores. It was then expected that this revenue gap in the non-plan revenue account of the State would be covered by the award of the Fifth Finance Commission. This has, however, not happened.

4.7 This huge deficit in the balance from current revenues can be minimised if the State makes efforts at prudent financial management and necessary economy in expenditure.

4.8 It is envisaged, therefore, that strict control of expenditure will be exercised by the major spending departments such as Land Revenue, Public Works, Agriculture, Education and Health Services. It is imperative that measures be taken to ensure prompt recovery of loans and interest payments from parties concerned. The success of all these measures aimed at achieving a greater degree of financial discipline and self-restraint in matters of expenditure, no doubt, calls for concerted and sustained effort on the part of all revenue earning departments and the major spending departments.

Loans from the Public:

4.9 The net borrowings from the market by the State over the Fourth Plan period are pitched at Rs. 28.65 crores (as against Rs. 15.57 crores in the original Draft Fourth Plan estimates). This gives an annual average of about Rs. 5.75 crores. The experience of market borrowing during the first year of the fourth plan indicates that it is possible to absorb a similar amount from the market without hampering the open-market borrowing programmes of the Central Government and the State enterprises.

4.10 It may be recalled that richer states like Maharashtra and Gujarat borrow yearly 3 to 4 times the amount (gross) fixed for

Kerala. This unevenness in the distribution of market borrowing can be avoided only by reorienting the procedure now followed with regard to the borrowing programmes of the State Governments. The credit-worthiness of different States in the same federal set-up does not warrant any invidiousness on the assessment of their capacity to raise loans. In this context it is necessary to so regulate the programme of investment of funds available with the nationalised commercial banks, the Life Insurance Corporation, Employees Provident Fund accumulations etc., that a more equitable programme of open market borrowing can be evolved by the States. The borrowing programme of each State could be fixed more realistically in relation to actual requirements of plan finance in respect of the State.

Share of Small Savings:

4.11 The receipts under this head during 1969-1970 and 1970-71 are expected to be Rs. 1.50 and Rs. 1.75 crores (net) respectively. For the Fourth Plan period a collection of Rs. 10 crores has been assumed as share of small savings. With the increase in agricultural production and the consequent rise in rural incomes and intensification of rural savings by the Postal Department, it may not be difficult to reach this target of small savings collections.

Unfunded Debt:

4.12 The net accretion under Treasury Savings Bank accounts, Provident Funds of Government Employees and Private School staff and the State Insurance Funds constitutes this head. The estimated receipts during 1969-70 are Rs. 3.05 crores; for 1970-71, it is expected to amount to Rs. 3.25 crores. The improvement that has taken place under this head consequent on the large scale admissions of Private School staff to the Provident Fund Scheme is likely to continue in the future years. Further improvement can also be expected with the implementation of the General Insurance Programme and the raising of the minimum level of contribution to the General Provident Fund of Kerala. The total receipts from this source during the Fourth Plan period are expected to be Rs. 17.25 crores.

Balance from Miscellaneous Capital Receipts:

4.13 The difference between the total non-plan capital receipts and the total non-plan capital disbursements including non-plan capital expenditure and loans is taken credit for under this head. The miscellaneous net capital receipts for the years 1969-70 and 1970-1971 are put at (—) Rs. 17.31 crores and (—) Rs. 18.94 crores respectively. The balance from this source during the five year period of the fourth plan would be (—) Rs. 94.92 crores. It has been assumed that the repayments in respect of loans from the

Centre for the Fourth Plan schemes would be in fifteen equal instalments. This implies a net increase of Rs. 10.04 crores in the outflow provided in the State Government's estimates [(—) Rs. 84.78 crores] under miscellaneous capital receipts for the three years from 1971-1972 to 1973-1974. An improvement under miscellaneous capital receipts can be expected only if there is a moratorium or at least further staggering of repayment of central loans and the categorisation of loans for purposes of consolidation is re-ordered on a more equitable basis.

Contribution of Autonomous Public Enterprises:

4.14 The total net contribution to the plan from this source includes the contributions of the State Electricity Board and the State Road Transport Corporation which are estimated to be Rs. 12.91 crores and (—) Rs. 15.70 crores respectively. (If there is to be sale of surplus electric power to Tamil Nadu during 1971-1972 to 1973-1974 on being requested by that State an additional amount of Rs 3 crores can be taken credit for under this head. The big loss in the working of the State Road Transport Corporation will have to be reduced progressively during the plan period. Further, it shall be the endeavour of the State Government to raise larger resources from the public sector enterprises by streamlining their administration and improving their efficiency of operation.

Additional Resources Mobilisation:

4.15 The additional resources mobilisation by the State Government during the Fourth Plan would be Rs. 50 crores (net). The new fiscal measures put through in 1969-1970 are expected to bring in Rs. 11.00 crores over the plan period. Out of this amount, Rs. 1.40 crores in 1969-1970 and Rs. 7.70 crores over the plan period have to be deducted as the cost of concession in school fees on account of the abolition of tuition fees in standards IX & X in the Secondary Schools introduced in 1969-1970. The additional measures, both tax and non-tax to be introduced in 1970-1971 are expected to bring in a net revenue of Rs. 24 crores over the Fourth Plan period.

4.16 Out of the proposed additional resources mobilisation of Rs. 50 crores over the plan period, profits from the recently started Commercial Enterprises Corporation (Chitties, Kuries, Hire Purchase, General Insurance etc.) increased receipts consequent on the enhancement of the minimum rate of contribution to Provident Funds, increased receipts from the State Electricity Board and other public enterprises and possibly additional receipts through the floatation of rural debentures are expected to bring in substantial amounts during the plan period. The source of additional tax are indicated in the Report of the Taxation Enquiry Committee of the

State Government. They include: land tax based on capital value, non-recurring tax on new buildings; revision of rates of agricultural income tax by bringing it on a par with the Central Income Tax rates; rationalisation of the rates of sales tax and Motor Vehicles tax, revision of rates and fees under the Kerala Motor Vehicles Rules; revision of rates of Excise duties, Stamp duties, Registration fees, Electricity duty etc. The additional tax receipts from the implementation of these measures are expected to amount to Rs. 23.40 crores over the plan period. This is the maximum that can be attempted in the present condition of the State's economy. The reasons for this are not far to seek.

4.17 The task of locating areas of additional taxation in a State where the tax potential itself is low and where taxation with reference to the potential is already high is by no means easy. With 1.27 per cent of the total area of India, Kerala has to support 3.85 per cent of the population a large proportion of which is in the high consumption, low production age group of under 15 years. This means that the wage earner in Kerala has to shoulder a relatively heavy burden. The incomes of large sections of people are low and their capacity to save is correspondingly low. At the same time the State Government spares no pains to mop up additional tax resources to the maximum extent possible. Kerala has thus come to be one of the heavily taxed states in India.

4.18 The per-capita rates of state taxes for 1964-65 and 1968-69 were Rs. 19.24 and Rs. 27.61 respectively as against the average of Rs. 16.71 and Rs. 22.89 respectively for all States taken together. The following table gives the comparative position.

TABLE 2

Per capita State taxes (in Rs.)

State	Per capita State tax rates		The proportion of per capita tax revenue to per capita income (%)
	1964-1965	1968-1969	
(1)	(2)	(3)	(4)
Andhra Pradesh	17.56	21.24	4.46
Assam	15.12	18.43	3.84
Bihar	9.99	12.23	3.58
Gujarat	21.13	30.70	4.98
Jammu and Kashmir	8.44	14.02	2.32
Kerala	19.24	27.61	5.20
Madhya Pradesh	16.36	19.18	4.04
Madras	20.55	31.09	4.72
Maharashtra	26.15	40.05	4.99
Mysore	16.71	26.50	5.46
Orissa	10.06	12.60	3.99
Punjab	22.94	29.92	3.91
Rajasthan	14.65	20.18	3.72
Uttar Pradesh	10.12	13.01	2.77
West Bengal	21.64	26.07	5.58
Average for all States	16.71	22.89	3.95

4.19 Against the target of additional taxation of Rs. 8.6 crores for the second plan, the State Government raised Rs. 12.12 crores. The third plan target of Rs. 23 crores was actually exceeded by Rs. 3 crores. The State's own resources during the three plans taken together constituted 39 per cent of the plan outlay as against the all India figure of 41 per cent. In spite of the high density of population and the economic backwardness of Kerala, the per capita resources of the State for financing the plan during the three five year plans was Rs. 71 as against the all India average of Rs. 72.

Negotiated Loans and State Enterprises' Market Borrowings:

4.20 The estimates for the Fourth Plan in respect of total receipts by way of negotiated loans and the State Enterprises' market borrowings amount to Rs. 33.35 crores. Of this amount, Rs. 13.35 crores are to be borrowed from the open market and Rs. 15.00 crores from the L.I.C. of India. The State Government are expected to borrow Rs. 5.00 crores (Rs. 4.00 crores from the L.I.C. of India as housing loan and Rs. 1.00 crore from the R.B.I. for share participation in the Co-operative sector) during the plan.

4.21 As regards the aggregate resources position of the Fourth Plan of Kerala, it may be pointed out briefly that the core of the financial resources of the plan remains as follows: central assistance of Rs. 175 crores, receipts from negotiated loans and State enterprises' market borrowing of Rs. 33.40 crores and additional resources mobilisation by the State Government of Rs. 50 crores. The actual implementation of the plan of the above size would be possible only if assistance is received from the Central Government to cover the gap in the non-plan budgetary resources of the State Government.

Central Assistance:

4.22 The central assistance component of the State's Fourth Five Year Plan has been arrived at by the adoption of the following pattern recently accepted by the National Development Council. Out of the total distribution table pool of Central assistance of Rs. 3,500 crores, Kerala gets Rs. 175 crores based on the following percentage distribution: (The following formula has been made applicable to all the States except Assam, Jammu and Kashmir and Nagaland which receive very special treatment):

- (i) 60% of the available assistance to be allocated in proportion to the population of each State;
- (ii) 10% to be distributed among six States, which have per capita income below the all India average;
- (iii) 10% on the basis of tax effort in the last three years in relation to per capita income;
- (iv) 10% in proportion to the commitments in respect of major continuing irrigation and power projects; and
- (v) 10% for special problems peculiar to individual States such as droughts, floods, special metropolitan problems, tribal areas and other special burdens.

The Award of the Fifth Finance Commission and its Impact on Kerala:

4.23 The award of the Fifth Finance Commission has caused great disappointment to Kerala. It has been estimated that the

continuation of the devolution of resources according to the interim award (or the award of the Fourth Finance Commission) would yield about Rs. 22 crores more than what the final award provides. Even when the Fifth Finance Commission gave its interim award earlier, the State was not satisfied because it had not secured the needed resources. The State Government had then represented to the Commission that the scheme of devolution should be so evolved as to cover the gap between its ordinary resources and its 'normal inescapable expenditure'. It had further urged that enough help should be given in the form of general and unconditional assistance for special burden and peculiar problems of Kerala.

4.24 But these problems seem to have been ignored by the Finance Commission. The revenues available to the States from their own sources are inadequate to meet their development needs. This deficiency in relation to their commitments is aggravated by a sharp disparity between the developed resources of the richer and the scanty revenues of the poorer States. And one of the more important functions of a Finance Commission in a federal set up is to seek to reduce and if possible to eliminate this disparity by equalising transfers from the Centre. From this point of view also the award of the Fifth Finance Commission has not only not helped in evening out disparities and inequalities among States but have accentuated this problem of regional and State imbalances as could be seen from the example of Kerala. A glance at the following table shows that except for Bihar (the lowest in the per capita income ranking as also securing the largest percentage increase in its devolution) there appears to have been no correlation between the per capita incomes of State and the increment in the devolution by the Fifth Finance Commission over that of the Fourth Finance Commission. Though Kerala's per capita income is below the all States' level, the increment in its devolution as per the award of the Fifth Finance Commission in comparison with the devolution effected by the Fourth Finance Commission, is hardly 3 per cent while Punjab with the highest per capita income has got an increase of 55 per cent in its total devolution.

TABLE 3

Per capita income of States (1964-1965) and percentage increase in distribution

<i>State</i>	<i>Per capita income (Rs.)</i>	<i>Total devolution by the Fourth Finance Commission (Rs. crores)*</i>	<i>Total devolution by the Fifth Finance Commission (Rs. crores)</i>	<i>Percentage increase in distribution</i>
(1)	(2)	(3)	(4)	(5)
Punjab	619	57.51	89.16	55.03
Maharashtra	529	260.38	383.66	47.35
Gujarat	523	121.55	182.75	50.35
Haryana	513	39.19	59.61	52.11
West Bengal	495	197.41	269.03	86.94
Assam	394	144.96	195.21	34.66
Andhra Pradesh	458	234.18	339.25	44.87
Tamil Nadu	436	207.32	295.10	42.34
Mysore	441	215.42	197.42	(—) 8.36
All States	423@	2885.86	4266.04	47.83
Kerala	391	188.61	193.43	2.56
Uttar Pradesh	374	373.02	620.12	66.24
Madhya Pradesh	378	162.03	274.02	69.12
Rajasthan	365	130.41	221.65	69.96
Orissa	368	231.85	250.68	8.12
Jammu and Kashmir	341	66.10	106.84	61.63
Bihar	292	197.46	407.38	106.31

*Estimated at the time of the Commission's Report.

@Average for all States.

4.25 In the existing system of Centre-State Financial relations, the devolution of resources from Centre to State has followed the beaten track as evidenced by the award of the Fifth Finance Commission. The increasing responsibilities accruing to the States as a consequence of centralised planning in a federal set up ought to have resulted in an automatic adjustment of the machinery of devolution of resources to the States. With actual appreciation of the developing strains and the reasons thereof, a satisfactory solution to the problem can and must be found.

CHAPTER V

EMPLOYMENT AND MANPOWER

One of the major objectives of planning is the full utilisation of human resources for productive purposes. Therefore, any Plan for economic development must contain a proper assessment of human resources and their utilisation. The problem of unemployment in India is becoming more and more acute on account of the high rate of growth of population and the slow pace of economic development. Despite eighteen years of planning, the problem of unemployment and under-employment continues to dominate the economic scene. There is obvious need for an active economic policy to utilise fully the human resources of the country for economic development.

5.2 In Kerala, the problems of unemployment and under employment are very serious. The State-wide sample survey on employment conducted during November-December, 1965, showed that there were 54.7 lakhs employed persons and 5.5 lakhs totally unemployed persons. Since the survey was undertaken during a period of intensive agricultural activity the size of unemployment was probably under-estimated.

5.3 The over-all labour force participation rate in Kerala is only 32.0 per cent which makes the dependency load on a worker very high. Nearly 54 per cent of the work force are engaged in agriculture and allied activities compared to 14.9 per cent in manufacturing. There is a concentration of female workers in the manufacturing sector mainly due to the predominance of traditional industries like cashew and coir. The employment pattern in the State is given below:—

<i>Employment Pattern in Kerala</i>	<i>Percentage</i>
Agriculture and Allied Activities	53.75
Manufacturing	14.90
Trade and Commerce	8.39
Public Services	4.86
Others	18.10

5.4 The high proportion of labour force engaged in agriculture and the large percentage of industrial workers in low productivity and low income industries such as cashew and coir reflect the economic backwardness of Kerala.

5.5 According to the Employment Survey, there were about 5.5 lakhs of persons who were totally unemployed in the State in 1965. No firm data is available for later years. The only regular source of information on unemployment is the live register of the Employment Exchanges which cover only a small portion of the unemployed and that too mainly the educated unemployed. Information collected in the sample survey referred to above showed that 18.6 per cent of the registrants were actually employed and that among the unemployed numbering 5.5 lakhs only 20.53 per cent were registered with the Employment Exchanges. On the assumption that these ratios have not undergone any significant change during the last three years, it is possible to estimate the number of unemployed from the live register figures. The figures so estimated are given below:—

TABLE 1
Estimated Unemployment
(Totally unemployed)

<i>Date</i>	<i>Total No. on live register</i>	<i>Unemployed on live register</i>	<i>Estimated total unemployed</i>
	(Lakhs)	(Lakhs)	(Lakhs)
31-12-1965	1.41	1.15	5.5
31-12-1966	1.57	1.28	6.2
31-12-1967	1.79	1.46	7.1
31-7-1968	1.96	1.60	7.8

5.6 These estimates, in spite of their limitations, broadly indicate the dimensions of the problem. The size of the live-register will depend on various factors and an increase in the number of registrants is not necessarily indicative of a proportionate increase in unemployment. There is no indication that the employment situation has improved during the period that elapsed since the conduct of the Employment Survey of 1965. Indices of employment for the public sector and the organised private sector show that in any case, employment situation during the last two years did not make any significant improvement.

Indices of employment (base: 31-3-1966=100)

<i>Period</i>	<i>Private Sector</i>	<i>Public Sector</i>	<i>Combined</i>
31-3-1966	100.0	100.0	100.0
30-6-1966	99.9	101.5	100.2
30-9-1966	100.2	101.9	100.8
31-12-1966	96.6	103.3	99.1
31-3-1967	96.5	103.1	98.9
31-6-1967	97.3	103.5	100.0
30-9-1967	96.6	104.2	99.6
31-12-1967	96.6	..	100.0
31-12-1967	..	..	99.6
31-12-1968	..	..	103.8

5.7 The labour force in 1968 is estimated to be of the order of 64.57 lakhs. Deducting from this the 7.8 lakhs of unemployed persons, the working force in 1968 works out to 56.8 lakhs. In the 1965 survey, it was found that 25.20 per cent of the employed were under-employed in the sense that they worked 42 hours or less during the week and reported that they were available for additional work. If the percentage is assumed to hold good for 1968, there will be about 14.3 lakhs of under-employed persons in the State.

5.8 Unemployment at the beginning of the Fourth Plan may be even more. Thus the magnitude of the problem to be tackled by the Fourth Plan will be more than what is presented above. The summary position will be as follows:—

(i) Backlog of unemployed	7.8 lakhs
(ii) New entrants to labour force during Fourth Plan	8.0 "
(iii) Backlog of under-employment	14.3 "

Under employment in the Agricultural Sector:

5.9 The agricultural sector accommodates the largest number of workers. The pressure on land has increased steadily resulting in a continuous decline in the per capita availability of land. Land per head of population in 1961 was only 57 cents. The per capita land availability further declined to 51.6 cents by 1965. The per capita net area under cultivation was actually 27.6 cents.

A distinctive feature of agriculture in Kerala is the predominance of perennial crops. Perennial crops occupy 47 per cent of total cropped area in the State as against 7.4 per cent for all India. Barring plantation crops like Tea and Rubber, labour requirements are generally low for perennial crops except at the stage of planting and harvesting. The All India Agricultural Labour Enquiry, 1956-57, has shown that a worker in the agricultural sector gets work only for 170 days. In other words, he is without work for more than 6 months in the year. According to the Farm Management Studies adult members of the selected households were employed on the average for 42.3 days in the farm and 142.1 days off the farm but in terms of the standard working day of 8 hours duration this came to 29.6 days and 119.4 days respectively. On the average an adult member of the household was able to find employment on his family farm for about 1.5 months and outside the farm for another 5 months. For the rest of the year he remained unemployed.

5.10 The above figures illustrate the dimensions of the problem of under employment in Kerala. It is imperative that at least during the Fourth Five Year Plan concrete steps be taken to minimise the heavy dependence on land so as to reduce both unemployment and under-employment. Apart from starting large and heavy industries an intensive effort may be made to establish a net work of small and medium industries throughout the State. In the mean time, the surplus labour force in agriculture may be utilised for creating agricultural infrastructure and other community assets.

5.11 It is necessary to associate the agriculturists with profitable projects in agriculture and in rural industries so as to ensure full utilisation of surplus labour. As far as possible, small projects for land improvement like minor irrigation, bunding, drainage schemes, etc., should be undertaken locally by utilising the existing surplus labour. It should be the endeavour during the Fourth Plan period to locate such rural works in areas where there is a concentration of surplus agricultural labour and to ensure that the benefits from such projects accrue to the really unemployed and under employed people and are not exploited by middle men and rich peasants.

Unemployment among the technically and professionally qualified personnel:

5.12 One of the special characteristics of Kerala is the high degree of unemployment and under-employment among the technically and professionally qualified personnel. This problem has assumed serious proportions in recent years. The annual outturn of educated man power from all higher educational institutions in the State is growing faster than the demand and the the number of

educated employment seekers is growing very fast. While the employment position gets harder, the pressure of demand for admission to higher educational institutions becomes intensified. Thus a process of "higher educational inflation" is emerging.

Unemployment among Engineering Personnel:

5.13 Since independence, facilities for technical training have been stepped up considerably, with a view to avoid shortage of key categories of technical personnel at future time points, when rapid development takes place in the productive sectors of the economy. But in these productive sectors the anticipated rates of growth were seldom realised and the economy to-day is not able to absorb all the trained personnel. This has resulted in a very serious situation where degree holders in engineering and technology with a number of years of specialised training face unemployment. Based on the past rates of growth of the different sectors of the economy, the demand and supply of engineering personnel in Kerala have been worked out and the result are shown below. This projection ignores the effect of migration.

Supply and demand for Engineering personnel 1968-67

Category	Backlog at the end of 1968-69	1968-69		1974-79	
		Supply including backlog	Demand	Supply including backlog	Demand
1. Graduates	2100	6765	1760	8283	3020
2. Diploma holders					
(a) 1:1.8	4090	12390	3200	17140	5470
(b) 1:1.15	4300	12600	2600	17950	4560
(c) 1:1.3	4440	12740	2310	18380	3950
3. Craftsmen	9000	55225	27600	73850	47400
					26450

5.14 As the estimates show, the Fourth Five Year Plan will start with a backlog of 2100 unemployed graduate engineers. During the Fourth Plan the productive sectors normally may not expand faster than in the earlier Plans. If so, it may not be possible to absorb more than 1760 engineers during the Fourth Plan. The total availability of graduate engineers at the present rate of intake during the Fourth Plan period will be 6760. With this increase in availability, the number of unemployed graduate engineers will also increase to 5000 at the end of the Fourth Plan period.

5.15 Unemployment will be more acute in the case of engineering diploma holders. At the beginning of the Fourth Plan period there will be a backlog of about 4300 unemployed diploma holders in engineering. If the present intake is continued the situation will be further worsened and the number of unemployed diploma holders will increase to 10000 at the end of the Fourth Plan period. It is, thus, obvious that the normal developmental programmes envisaged under the Plan will not be adequate in providing relief to these unemployed engineers and technicians. Special intensive measures have therefore to be undertaken.

Unemployment among Medical Personnel:

5.16 The employment situation among medical and public health personnel is also not very encouraging. In the past, Government used to offer appointments to all the medical graduates qualifying from the medical colleges in Kerala. However, considered from the point of view of financial resources, Government may not be able to absorb all the medical graduates hereafter. Requirements of doctors have been worked out here using the past rate of increase in the number of those in service. The summary position is given below:—

	<i>Fourth Plan</i>	<i>Fifth Plan</i>
1. Stock of Doctors at the end of 1968-69	2215	...
2. Additional requirements	1440	1995
3. Availability	2410	2410
4. Surplus	970	415

5.17 During the Fourth Plan period about 1000 medical graduates will have to find avenues of employment in the private sector. Most of these graduates will not be in a position to set up their own dispensaries due to lack of finance. The possibility of utilising the services of these doctors with partial assistance from Government deserves very serious consideration.

Unemployment among Teachers:

5.18 Preliminary studies indicate that among trained teachers (including degree holders) also unemployment is becoming a serious problem. Studies conducted by the State Planning Board indicate, that at present, there are about 6000 unemployed T.T.C. holders in Kerala State. In view of the limited possibilities of expanding educational facilities in Kerala—a State where a sizeable proportion of budgetary revenue is already spent on education and future growth of educational facilities will be limited by scarcity of finance it is likely that the volume of unemployment of T.T.C. holders will increase to about 15000 by the end of the Fourth Plan. In addition, it is estimated that there will be about 5000 B.Ed. degree holders who are likely to remain unemployed at the end of the Fourth Plan.

5.19 The above serious problem of educated unemployment calls for imaginative steps both by the Government and the large number of private institutions in the educational field and a re-orientation of educational policy to ensure that more realistic and scientific manpower planning is undertaken in the years to come.

Special Schemes to tackle the Unemployment problem in Kerala:

5.20 On the employment front the Fourth Plan specifically incorporates measures for providing relief to the underemployed and also to arrest the increasing trends in unemployment in the traditional industries like Coir, Cashew, Beedi, Handloom and handicrafts. The majority of the industrial workforce in Kerala, it may be remembered, is engaged in these industries. In the selection of schemes to be included in the Fourth Plan, care has been taken to increase the employment content of the Plan to the extent possible, without sacrificing the other important requirements of long term growth.

5.21 Regarding specified categories of technically trained manpower, the Fourth Plan proposes to break new grounds. In the light of past trends in the rate of growth of the economy of the State the possibility of absorbing all the engineering and medical personnel turned out from the institutions within the State appears remote, because it calls for considerable stepping up of the public and private sector investments, which do not appear feasible on available indications regarding the financial resources.

5.22 The Fourth Plan, therefore, proposes to put forward a number of proposals, mainly meant to attract these highly qualified personnel into self employment, for which initially the Government will provide assistance in various ways.

Engineering personnel:

- (i) Engineering graduates desirous of starting their own industry should be given preference in the matter of loan

assistance provided by Government. This practice, though it is being followed even now has not fully succeeded in attracting many such engineers in the past. However, more intensive efforts will be made for providing greater assistance.

- (ii) It is proposed to convert the existing Industrial Training Institutes into production-cum-training centres. The trainees who have passed out from these institutions would be permitted to utilise, during the off-hours, the machinery available with the institutes to produce some of the marketable consumer goods. The Fourth Plan proposes to extend this idea to all the training institutions in the State.
- (iii) Some of the minor and medium works of Public Works Department, and Public Health Department may be entrusted to "Engineers' Co-operative Societies" with necessary financial assistance instead of giving the work to the contractors.

Medical and Public Health Personnel:

In the case of medical graduates the following three proposals are included in the Fourth Plan:

- (i) Organisation of Co-operative Medical Stores in villages and providing facilities to medical graduates to practise there on their own account.
- (ii) Group-practice facilities will be provided by Government in sub-urban areas. These will be fairly well equipped dispensaries, where a group of five or six doctors can practise their profession as self employed.
- (iii) Loans and grants to medical graduates to set up private practice of their own.

The above proposals, it is hoped, will attract a number of enterprising and self confident medical graduates into private practice. Automatically employment opportunities for para-medical personnel will also increase.

5.23 The unemployment situation in the State has assumed menacing dimensions. Rapid industrialisation of the State's economy, aimed at fuller utilisation of both the natural resources and man power potential is the only permanent solution. But this would involve huge investments. Employment generation depends on the scale and tempo of overall economic development. In solving the problem of unemployment Kerala has to depend, in a large measure, on the Central and Private Sector investments besides investment in the State Sector.

SECTORAL PROGRAMMES

I AGRICULTURAL PROGRAMMES

The major problem to be tackled by the State's Fourth Five Year Plan in the agricultural sector is the huge deficit in foodgrains of the order of 50 per cent of the requirements. Of late this problem has assumed serious proportions because of the increasing uncertainty in the receipt of rice supplies from other parts of the country. The people of the State have been put to considerable hardship owing to inadequate supply of rice. It is, therefore, essential that the Fourth Plan should aim at attaining the highest possible level of food production.

2. Though it may not be possible to wipe out the huge deficit altogether during the period of the next five years, rice production in the State could be raised reducing the gap considerably. Between 1960-61 and 1967-68 it rose from 10.68 lakh tonnes to 11.24 lakh tonnes, recording an aggregate increase of 5.2 per cent. With the advent of the high yielding variety strains, improved infra-structural facilities and favourable rainfall, the State could record a production of 12.51 lakh tonnes in 1968-69. Considering the potentialities of production and the feasibility of improvement in the existing institutional set up, infrastructure and availability of input factors, a target of 17.5 lakh tonnes is set for achievement by the end of 1973-74. Over the Fourth Plan period, the per capita internal supplies available for consumption will be raised from 148 gms. per day in 1968-69 to about 190 gms. per day in 1973-74, registering a net increase of 28 per cent over the years. (The assumption is that only 90 per cent of the internal production will be available for consumption, the rest will go as seed, wastage, etc.)

3. The above target is programmed to be achieved as follows:

- (i) By organising paddy cultivation on yelah basis enforcing uniform cultivation practices on each contiguous stretch of paddy land.
- (ii) By increasing the yield rates of rice through improved methods of cultivation. This will mean the supply of adequate quantities of inputs such as improved seeds (IR-8, Taichung native-1, culture-28 etc.) fertilisers, water, pesticides and credit facilities.
- (iii) By bringing additional area under cultivation by reclamation of saline and otherwise water logged areas, by construction of bunds in Kayal, Kari and Kole lands and by bringing low lying pockets in forest areas under paddy cultivation.
- (iv) By providing infrastructure requirements.

Yelah Production Programme:

A New Approach to Intensive Paddy Cultivation:

4. The planned efforts in the past did not have the desired impact. The targets set for rice production in successive Plans could not be achieved despite massive efforts by the State to provide infrastructure facilities, inputs and financial assistance in the form of grants and loans. Even the Package Programme which was a concentrated attempt at making available all the production requirements in a package as it were to the farmers in the best paddy growing districts of the State failed to bring about the expected breakthrough in rice production. All this was due mainly to the fact that the majority of the cultivators especially the small holders, did not come forward to avail of the facilities offered to them for various reasons. A lesson to be drawn from past experience is that any intensive agricultural programme can survive only if there is built-in provision for ensuring participation by all or at least the majority of the cultivators in the programme.

5. In the Fourth Plan, a new approach is envisaged for organising paddy production with the Yelah or Padasekharam as the basic unit for planning and implementation of the production programme. All the ryots in the Yelah will act jointly in the procurement and timely application of inputs and in the adoption of other improved cultivation practices. The State on its part will provide the necessary assistance and legislative safeguards in the organisation of the farmers and smooth functioning of the programme. The new programme when implemented in full, will yield all the advantages of large scale operation and facilitate rapid and integrated development of the agriculture sector in a big way.

6. While the Package Programme and the Intensive Agricultural Area Programme will continue according to the all India pattern, the Yelah Programme will be tried in selected centres during the Fourth Plan period. The progress of the scheme will be reviewed each year before new areas are brought under it.

Credit Card System:

7. In the past, the small cultivators could not often benefit from the facilities and assistance provided by Government, due to the limitations in the existing institutional set up. In Kerala, small cultivators with operational holdings of less than 2.5 acres each hold nearly 31% of the total area. Any production programme which does not bring within its fold the small cultivators cannot, therefore, be fully effective. The Fourth Plan proposes to eliminate the handicaps of the small cultivator, by modifying the procedures for obtaining Governmental assistance. A programme to introduce for each ryot a credit card which gives a certified record of his

credit requirements will be implemented during the Fourth Plan period. This, when introduced, will go a long way in eliminating procedural delays.

8. The institutional agencies like the Agricultural Refinance Corporation have been playing a relatively less important role in the development of the State's agriculture. All efforts will be made in the Fourth Plan to step up the availability of institutional credit to farmers from such agencies. It is hoped that funds from A.R.C. will be forthcoming for the development works like construction of permanent bunds in Kuttanad area.

9. The Department of Agriculture is operating a number of loan schemes to provide credit for the development of various crops. The amount of credit disbursed in the case of individual crops is so small that it can hardly create a visible impact on the production or productivity of any of the crops in the State as a whole. At the same time the operation of these loan schemes takes away much of the time and energy of the technical staff in the Department. Moreover the amount provided in the Plan for this purpose is an avoidable drain on the State's scarce plan resources. It is, therefore, suggested that in the Fourth Plan all types of agricultural credit will be provided through institutions such as Service Co-operatives, Land Mortgage Banks and Commercial Banks. This step will enable the technical staff of the Department to concentrate on agricultural research, extension work, plant protection and organisation of paddy production at yelah level.

10. Direct State assistance to farmers in the form of loans, subsidies and grants was given at a time when the institutional agencies for financing agricultural development were not strong enough in the State. Farming too was then less remunerative or uneconomic. This situation has now changed considerably. Farming has come to be viewed more as a business proposition than as a way of life and institutional finance is now readily available to assist agricultural development. The food crops as well as the commercial crops fetch high and remunerative prices. In view of the changed circumstances and the paucity of resources, issue of Government loans, subsidies and grants will be discouraged as far as possible during the Fourth Plan.

Agrarian Reforms:

11. Policies and programmes in the past did not succeed in creating among the peasants an awareness that they form the foundation on which the whole economy is built and that they have a crucial role to play in the task of economic reconstruction of the country. The solemn promise of the national leadership to make the tiller of the land its owner still remains a slogan. The poor cultivator is still struggling under the heavy burden of feudal

liabilities. The abolition of the Zamindari System though proclaimed as a great achievement of the national leadership has done very little for the cultivating class. All efforts to boost agricultural production will not produce the desired effects unless the feudal liabilities are completely wiped out and the cultivator is put on his own feet.

12. Agrarian Reforms in Kerala in the past could not achieve significant results. Widely varying systems of tenancy prevailed in the different regions of the State. Attempts at land reforms in the former State of Travancore-Cochin and in Kerala during the post-independence years were not fully effective as they were subjected to frequent revisions by successive Governments. The cultivating class in Travancore area was by and large free from the age old feudal liabilities, exceptions being only those who possessed lands under sub-lease. In the Cochin area most of the old tenancies like verumpattom and kanapattom continued undisturbed. The tenancies in Malabar area were different from those obtaining in Cochin and Travancore areas. It was, therefore, considered desirable to do away with all kinds of tenancies. This was sought to be achieved by the Land Reforms (Amendment) Act of 1969.

1.1 AGRICULTURAL PRODUCTION

The agricultural programme in the Fourth Plan should be so oriented as to maximise agricultural production through the fullest utilisation of available resources. Schemes will have to be oriented on realistic lines so as to have practical impact on the agriculturists resulting in increased production. On the basis of the experience gained during the past three plan periods the organisational set up of the Agriculture Department including its functional aspects will have also to be suitably changed for giving it the much needed production bias.

2. Agriculture is comparatively better developed in Kerala. It is characterised by good yields, a high intensity of cropping and superior cultivation techniques. The superiority of this cropping pattern lies mainly in the large number of high value yielding plantation crops grown in the state. The abundance of rain and the natural fertility of the soil have made Kerala an essentially agricultural region. Diversity of crops and heterogeneity in cultivation are the keynotes of agriculture in the State.

3. The superior cropping pattern has brought with it a huge food deficit. The agricultural economy of Kerala is largely an exchange economy which relies for its food requirements on the

other parts of India and in return contributes to the economic development of the country by earning valuable foreign exchange through the export of raw and semi-processed commodities.

4. It has to be noted in this connection that Kerala's agricultural economy has certain special features inhibiting a fast pace of progress. One is the limited supply of cultivable waste lands available for reclamation. Secondly, agricultural productivity in Kerala being comparatively high the effort necessary for raising it further is much more than is the case with the rest of India. In an environment of static agricultural technology, the deteriorating land-man ratio is bound to present grave economic problems. The only way out is to reorient the agricultural plan with emphasis on stepping up productivity through technological improvement. Thus the natural constraint, viz., scarcity of cultivable land, can be overcome by a productivity-oriented plan.

5. It becomes imperative that a concerted drive is made for increasing the production of rice from existing fields of the State. Schemes for increasing the production of subsidiary food crops like tapioca, pulses and vegetables should also be undertaken. The seriousness of this problem warrants the setting up of a separate organisation solely devoted to food production.

Achievements under past plans:

6. During the 19 years of planning there was considerable increase in the area and production of principal crops in Kerala. The following table illustrates this.

Progress in Agricultural Production

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Crops	1952-1953		1965-1966		1968-1969	
	Area (Hectares)	Production (Tonnes)	Area (Hectares)	Production (Tonnes)	Area (Hectares)	Production (Tonnes)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Food Crops:						
Rice	742160	722380	802330	997490	873900	1251000
Tapioca	204720	1514350	229680	3095660	296700	4081000
Cash crops:						
Coconuts	430400	2978 (m. nuts)	586310	3293 (m. nutt.)	686100	3834 (m. nuts)
Arecanut	60000	4448 (m. nuts)	64480	9681 (m. nuts)	81200	12289 (m. nuts)
Pepper (black)	78800	22630	99700	21690	98827	20000
Sugarcane	6500	29470	9190	40950	7900	50304
Ginger (dry)	14070	10180	11850	11190	11423	10839
*Cotton	6410	6944 (Bales)	7160	6944 (Bales)	6300	5556 (Bales)
Oil Seeds	29610	19860	27170	27590	25113	27990
Plantation Crops:						
Cardamom (processed)	25540	1230	28680	1610	47026	1055
Cashewnut	35410	54750	87370	98030	96000	108000
Rubber	62580	19260	149630	46950	168500	66000
Coffee	12610	5110	23600	9880	27700	12000
Tea	44980	30220	29470	39150	41200	45000

* Bales of 180 kg.

7. The investments in the First and Second Plans had helped the State's rice production to reach the level of 10.68 lakh tonnes in 1961 from 7.22 lakh tonnes in 1953. But this was just sufficient to provide only a per-capita supply of 154 grams per day. The Third Plan target of rice production was 14.38 lakh tonnes but it could not be realised. The reasons for this were (1) two successive years of drought in 1964-1965 and 1965-1966 (2) the physical achievement under irrigation (6 lakh acres) being much less than the plan target of 10 lakh acres and (3) the inadequate supply of fertilizers.

8. Agricultural production is a function of the area under crops and the yield per unit area. The gross area under all crops in the State increased from 2089 thousand hectares in 1952-53 to 2757 thousand hectares in 1967-68, the percentage increase being 32. This works out to an average annual increase of about 2.13% which is a satisfactory rate of expansion considering the limited scope for extensive cultivation in the State. During the three plan periods, the emphasis in the agricultural development programme of the State was on intensive cultivation rather than extensive cultivation. The achievements in the sphere of intensive cultivation were, however, much below expectations.

Objectives of the Fourth Plan:

9. The following broad objectives of the Fourth Five Year Plan of Kerala have been identified on the basis of a detailed examination of the problems and potentialities of agricultural growth.

- (i) to progressively reduce the food deficit of the State, particularly the deficit in rice, and to attain relative self-sufficiency.
- (ii) to expand the output of commercial crops mainly through a concerted programme for enhancing productivity.

The programme of development proposed under the various sub-heads are discussed below:—

Fertilizers:

10. Fertilizer consumption during the current year is estimated as follows:—

	(in thousand tonnes)
N	40
P ₂ O ₅	30
K ₂ O	30

The anticipated consumption of fertilizers in 1973-74 is 65 thousand tonnes of N and 55 thousand tonnes each of P₂ O₅ and K₂ O. The application of soil conditioners like Dolomite and

Calcium Carbonate will also be stepped up. It is proposed to distribute during the Fourth Plan period 2 lakh tonnes of Dolomite and Calcium Carbonate.

Plant Protection:

11. Plant protection measures are universally recognised to be essential for augmenting the crop yield. With the introduction of the high yielding varieties of paddy and the anticipated target of 5 lakh hectares to be brought under high yielding varieties and 1.30 lakh hectares under improved varieties, plant protection work assumes increased importance. Therefore, the plant protection activities of the Department will have to be intensified so as to cover the maximum area possible. The physical targets set for plant protection activities at the end of 1973-74 are: seed treatment 2.8 lakh hectares, rodent control 1.6 lakh hectares, intensive seed treatment 7.5 lakh hectares and weed control 0.01 lakh hectares.

12. Distribution of plant protection chemicals in the State is being done at 33½ per cent subsidy during the current year. In view of its importance in the high yielding variety programmes, this subsidy cannot be stopped abruptly. It is therefore proposed to reduce the rate of subsidy to 25% in the first year of the Fourth Plan, to 15% in the second year and to do away with it thereafter.

Agricultural implements:

13. The intensive agricultural development programme envisaged under the Plan will necessitate the mechanisation of agricultural operations to a certain extent. It is proposed to introduce efficient implements like tractors, bull dozers, power tillers, power sprayers and pump sets during the Fourth Plan period. The distribution of these implements will be undertaken by the Agro-Industries Corporation. Provision is made for imparting necessary training in and demonstration of agricultural machinery and implements.

14. The Agro-Industries Corporation will play the major role in the distribution and popularisation of improved agricultural implements. Provision is made in the plan for strengthening the Corporation financially so as to undertake this function.

Commercial Crops:

Coconut:

15. Coconut is the most important cash crop of Kerala. It occupies an area of 6.86 lakh hectares; the total production in 1968-69 estimated at 3834 million nuts. The programme for the Fourth Plan is to raise the production to 5,000 million nuts. The present schemes like comprehensive spraying, biological control of

nephantis serinopa, production and distribution of quality coconut seedlings etc., have to be continued. However, the package programme for coconut will be discontinued in view of the remunerative prices of coconuts and the availability of chemical fertilizers. The existing developmental staff will give special attention to extension work and organisation for supply of inputs.

Pepper Development:

16. The distribution of rooted cuttings of improved varieties of pepper to cultivators will continue. Research on pepper will be stepped up during the Plan period. Since the market prospects for pepper are not so bright as to warrant an expansion in the area, assistance will be given for replanting purposes only. By the end of the Plan, production of pepper is expected to go up to 0.25 lakh tonnes.

Cashew Development:

17. The Agriculture Department has established a cashew plantation in an area of 5,000 acres of Government lands in Cannanore District. This will be properly maintained and cashew plantations will be extended to new areas during the plan period. The target set for production is 1.50 lakh tonnes.

Ginger Development:

18. Seed multiplication centre for ginger started at Neriamanalam will be intensified and seed materials of improved strains of ginger viz., Rio-de-Janeiro will be made available to the ginger growers of the State. The programme will help to raise production of ginger to 0.12 lakh tonnes.

Agricultural Education:

19. Additional facilities for education and research will be provided in the Agricultural College, Vellayani. New units for study and research in bacteriology, nematology, horticulture, plant physiology, cytogenetics, parasitology, toxicology, insect biology, agricultural statistics, agricultural economics etc., will be created.

Agricultural Research:

20. High priority is given for research on important crops of the State. Crops such as rice, coconut, arecanut, banana, sesamum and vegetables are covered by the programme. Adequate provision is made for centrally sponsored research projects also. The main emphasis in the agricultural research programme will be on schemes to tackle the problem of plant diseases and epidemics affecting the crops like the leaf and root diseases of coconuts, yellow leaf disease

for arecanut, bunchy top disease of banana etc. Another field for useful research covered under the programme is the evolution of improved seeds.

State farm with Russian assistance:

21. It is proposed to set up a State farm in Kerala with Russian assistance. The site for the farm has been selected at Aralam in Cannanore District. The State will make available 4,800 hectares of land for the purpose. Provision is made for the construction of the approach road and a bridge. The farm, when established will serve as a production-cum-research-demonstration farm and will have great impact on the State's agricultural development.

Mobile Soil Testing Laboratories and Soil Testing in Private Colleges:

22. There are only three soil testing laboratories in the State located at Trivandrum, Alleppey and Palghat. As it was felt that these three laboratories could not meet the needs of the cultivators fully, a new scheme for setting up soil testing laboratories in science colleges was started. The laboratories started under the scheme will be continued. In view of the necessity to step up fertilizer application on scientific lines it is proposed to set up three mobile soil testing laboratories to conduct soil analysis and to furnish the results and recommendations on the spot.

Training of Agricultural Personnel:

23. The scheme relates to training of Departmental Officers at various levels. Training will be imparted to Agricultural Assistants, Extension Officers, Fieldmen, Maistries, Spraying supervisors etc.

Agricultural Statistics:

24. There is dearth of agricultural data which hampers efficient planning. It is necessary that during the Fourth Five Year Plan the quality of the available statistics be improved and the lacunae removed to the extent financial resources permit.

25. The plan schemes currently in operation under Agricultural Statistics are mainly the following:—

- (i) National index of field experiments for the use of the State Department of Agriculture and Institute of Agriculture Research Statistics, New Delhi.
- (ii) Estimation of Index Number Series relating to agricultural economy.
- (iii) Strengthening of Prices and Market Intelligence Units.
- (iv) Estimation of area under the production of minor crops.
- (v) Pre-harvest estimation of crop acreages, improvement of plantation statistics, and
- (vi) Collection of Statistics on the extent of cultivation of pepper.

26. Agricultural research studies on cost benefit ratios of projects, effect of mixed cropping on yield of crops, cost of cultivation of crops, productivity of lands under different conditions of ownership and cultivation etc., will be taken up during the Fourth Plan period.

Intensive Cultivation Programme:

Paddy:

27. As the State is at present deficit to the extent of 50% of its requirements of foodgrains, and since the supply of foodgrains, from other states has been rather erratic in the past, there is no alternative but to aim at achieving relative or near self-sufficiency. From a purely income point of view, it may be advantageous to change the cropping pattern, to the extent to which such changes are feasible, in favour of the more remunerative cash crops. If the proposed high yielding varieties programme succeeds, paddy production is likely to become more remunerative than most of the commercial crops. In other words, the 'social performance' now being proposed for foodgrains production has a high probability of becoming the reality in a dynamic setting. The long term perspective for food production should therefore set the bold target of reducing the food deficit in Kerala within a reasonable time-horizon.

Yelah Production Programme:

28. Under the present circumstances in the State with a limited scope of expansion of area under crops, the scope of increasing the agricultural production especially foodgrains depends solely on a bold strategy of agricultural development based on intensive cultivation and improved agricultural practices. With this object in view, the area under high yielding varieties will have to be increased considerably. A target of 5 lakh hectares (gross) is fixed for this. As a new innovation, about 5 per cent of this area will be operated on a priority basis through "Yelah production Plans".

29. A comprehensive programme will have to be drawn up for organising production at yelah level on the basis of the following items:

- (1) Ensuring infrastructure requirements of each yelah by way of improvement of irrigation facilities and production oriented lay out
- (2) Ensuring essential items of inputs like water, fertilisers, credit, seeds, pesticides, improved agricultural machinery and technical know-how,
- (3) Ensuring co-operation from the ryots of the locality by organising Yelah Committees and also voluntary labour force for attending to the infrastructure requirements. It is proposed to select paddy areas extending over 500 acres either individually or collectively as a unit of operation. Such area will be located and marked out in each of the districts and will be numbered.

serially as production units. The proposal is to concentrate the entire production activity by way of bringing it under high yielding varieties, fertilizers, pesticides, irrigation, improved agricultural machinery, finance and technical personnel on these particular production units.

30. The novelty of the Yelah programme is that it is a completely production oriented programme with a definite 'must' of participation in it by all the cultivators falling under the Yelah. The one reason for the short falls in the achievement of the I.A.D.P. and I.A.A.P. has been the organisational problem in bringing all the cultivators under the fold of the schemes. Except for a handful of large cultivators, often known as progressive farmers, the majority of the cultivators whose holdings are small for whom farming is a subsistence occupation are indifferent to the package concept. Their participation in the Package Programme has been rather irregular and incomplete. Therefore, any organised attempt which will make all the cultivators adopt improved agricultural practices, is a sure way of promoting overall productivity. Besides, it will make it possible to achieve the economies of scale which under the present pattern of small farms are not feasible. One added speciality of the programme is that while the cultivators will retain the ownership of their holdings they will have the full benefit of a large output ensured by prompt and systematic adoption of improved agricultural practices.

31. The Yelah production programme will be introduced in selected centres in districts other than Quilon and Cannanore. The two districts have been exempted from the purview of the programme as they have been chosen by the Government of India to introduce more or less similar scheme under the small farmers development agency. The areas to be brought under the scheme are as given below:—

District	Unit	Area (acres)
(1)	(2)	(3)
1. Trivandrum	6	3000
2. Alleppey	6	3000
3. Kottayam	6	3000
4. Ernakulam	6	3000
5. Trichur	6	3000
6. Palghat	6	3000
7. Malappuram	6	3000
8. Kozhikode	6	3000
Total	48	24,000

32. The following inputs will be made available to these production units through the nearest Service Co-operative Society already existing.

Improved seeds

Fertilizers

Pesticides

Finance

Plant protection equipment

Improved agricultural machinery

33. Each production unit of 500 acres may comprise either one or more Padasekharam. A committee consisting of five elected representatives will be constituted for each Yelah/Padasekharam. The Yelah Committee will be recognised by Government as legal body. In the case of production unit comprising different Padasekharams a Central Committee for the production unit will be formed with two representatives of each yelah. The Panchayat Members coming under the production unit will also be co-opted as members of the Central Committee. It is also proposed to organise a voluntary labour force for each Padasekharam so as to attend to the permanent infrastructure improvement works like deepening of tanks, providing irrigation channels, etc.

34. For the ready availability of the input items and for efficient technical supervision, it is proposed to establish production offices preferably on the side of the selected paddy area. The office of the Production Assistant, one for each unit, will preferably be located adjacent to the Office of the Co-operative Society catering to the production unit. The Production Assistant will be assisted by four trained maistries each one serving about 125 acres of paddy area. The Production Committee with the technical help of the Production Assistant will make an assessment of the requirements of inputs fertilizers, credit, etc., and collect individual applications from the cultivators well in advance and process the same so as to ensure the timely application of inputs into the fields. The infrastructure requirements like land improvements, providing irrigation facilities, etc., will be assessed by the Production Committee and the Production Assistant and will be listed out according to priority and the same will be executed in a phased programme utilising the voluntary force organised in each production unit. Necessary equipment will have to be stocked in the headquarters of the production unit. The revenue expenditure of the production unit covering 500 acres for one year will amount to Rs. 1,63,460 of which Rs. 1,50,000 is to be given as loan at Rs. 300 per acre, which is recoverable immediately after the harvest of the crop. The credit required for the implementation of the programme will be made available through credit co-operatives. The non-recurring expenditure amounts to Rs. 51,500 per unit. Thus only Rs. 64,960 is to be expended for the establishment of one production unit of which Rs. 13,460 will be the annual

recurring expenditure. Considering the immense benefit which is likely to accrue by the implementation of the scheme the investment is not heavy. A total outlay of Rs. 145 lakhs is provided in the Plan for the yelah programme and other intensive cultivation programmes.

35. In the preparation of Yelah Plans, the Production Committee may seek the assistance of local unemployed engineering personnel for making plans and executing minor irrigation works needed by the Yelah.

Land Development:

36. Two land improvement works were in progress during the Third Plan, namely Thannirmukkam Bed Regulator and the Kattampally Scheme. The first stage of Kattampally Scheme has been more or less completed and only a sum of Rs. 2 lakhs is required for its second stage. A provision of Rs. 100 lakhs is needed for the completion of Thannirmukkam Scheme. Adequate funds are provided in the Fourth Plan for the speedy implementation of the two projects.

Land Reforms:

37. A new piece of legislation, viz., the Kerala Land Reforms (Amendment) Act was passed in 1969 and it came into force from 1-1-1970. The most remarkable feature of this Act is that it has ended all forms of tenancies in the State. It also confers additional benefits on kudikidappukar while safeguarding the genuine interests of small landowners. Unlike the previous legislations the present Act enables the kudikidappukar to acquire absolute ownership in a prescribed extent of land adjourning their kudikidappu by paying a nominal compensation. The compensation fixed in this regard is only twenty-five per cent of the market value of the land, half of which will be borne by Government. The Act also takes a more lenient view of the problems and hardships faced by small ownership classes as a result of the land reforms measures and provides for their rehabilitation.

38. In order to implement the provisions contained in the Act and to help the really affected and deserving classes, certain allocations are made in the Fourth Plan. A Kudikidappukar Benefit Fund for rendering better facilities to the kudikidappukar will be created. Similarly an Agriculturists Rehabilitation Fund for providing help by way of loans and grants to persons affected by this Act will be instituted.

Settlement of Landless Agricultural Labourers:

39. In the Third Plan 4,000 families were settled incurring an expenditure of Rs. 29.68 lakhs. During the Fourth Plan, the programme is to settle 5,000 families on Government lands, at an estimated cost of Rs. 150 lakhs in case sufficient land becomes available.

Re-survey of State:

40. This is a scheme eligible for 50% Central assistance. Two survey parties were engaged from 1966-67. From 1968-69 seven parties are working at it. The total extent to be covered is 18,410 Sq. km. This is to be achieved in a phased programme of 11 years from 1966-67. A provision of Rs. 300 lakhs has been proposed for the engagement of seven survey parties each year to achieve the physical target of 5,700 Sq. km. during the Fourth Plan period.

Preparation of Record of Rights:

41. The Kerala Land Reforms Act envisages the preparation of record of rights to tenants in the State which will be admitted in evidence by courts and tribunals to help those who have no written record to be produced in support of their rights. The State will be getting 50% Central assistance for this work. There is at present no authentic record wherein the identity of the actual occupants and the identification details of lands which they are in occupation at any point of time are recorded. The record of rights will actually be a record of occupancy.

42. The settlement scheme, if it has to be completed within a period of five years, would require the engagement of 18 settlement parties controlled by a Settlement Commissioner. The cost of each settlement party will be about Rs. 2.50 lakhs per annum. A provision of Rs. 250 lakhs is included for this in the Fourth Plan.

Other Schemes:

District Agricultural Farms:

43. Besides continuing the activities undertaken in the 8 District Agricultural Farms already functioning in the State two farms are proposed to be started during the Fourth Five Year Plan period, one in Quilon District and the other in Malappuram District.

Krishi Karyalaya:

44. The Departments in charge of agriculture and allied activities are housed in private buildings widely dispersed in different

parts of Trivandrum. It will be highly desirable to have these Departments together in one Government building. Besides improving efficiency, this will result in considerable savings of rent charges. It is therefore proposed to put up a building at Trivandrum to house the headquarters units of the Departments of Agriculture, Animal Husbandry, Fisheries, Co-operation, etc.

FOURTH PLAN PROPOSALS

Agricultural Programme

(Rs. in lakhs).

Sl. No.	Head of Development	State sector outlay	Central sector outlay
(1)	(2)	(3)	(4)
1.1	Agricultural Production		
	<i>Group I—Improvement of existing seed farm:</i>		
1	Scheme for establishment of seed farms and seed production	32.00	..
2	Multiplication and distribution of high yielding strains of paddy	15.00	
3	Facilities for the Central Farm (Aralam)	40.00	..
	Total	87.00	..
	<i>Group II—Manures & Fertilizers:</i>		
	Green manure Plantation at Trikkakkara	0.20	..
	<i>Group III—Plant Protection:</i>		
4	Plant Protection and control of pests and diseases	50.00	..
5	Rodent Control	7.50	..
	Total	57.50	..
	<i>Group IV—Agricultural Implements:</i>		
6	Provision for further State Government Participation in the Share capital of the Agro-Industries Corporation	50.00	..
	Total	50.00	..

<i>Sl. No.</i>	<i>Head of Development</i>	<i>State sector outlay</i>	<i>Central sector outlay</i>
(1)	(2)	(3)	(4)
<i>Group V—Commercial Crops:</i>			
7	Sugarcane (a) Production & Distribution of quality sugarcane	2.00	..
	(b) Improvement of Communications in factory areas	10.00	..
8	Cocount:		
	(a) Spraying for the control of leaf diseases	80.00	..
	(b) Protective belt spraying		
	(c) Biological control of Nephantis Serinopa	2.50	..
	(d) Production and distribution of quality seedlings	35.00	..
	(e) Control of Rhinoceros Beetle	1.00	..
	(f) Expansion of area under coconut	30.00	..
	(g) Introduction of Malayan Semi-tall variety	2.00	4.85
	(h) Increased production of T × D. Seedlings	..	..
9	Pepper:		
	(a) Pepper Nurseries	2.50	..
	(b) Organisation of demonstration plots for hybrid pepper	..	1.25
	(c) Central nursery for hybrid pepper and exotic ginger	..	6.00
10	Multiplication and distribution of improved varieties of ginger	0.50	2.50
<i>Cashew:</i>			
11	(a) Prophylatic spraying for the control of mosquito	..	2.45
	(b) Production and distribution of cashew airlayers	..	2.15

<i>Sl. No.</i>	<i>Head of Development</i>	<i>State sector outlay</i>	<i>Central sector outlay</i>
(1)	(2)	(3)	(4)
12	Cardamom—Supply of planting materials	..	6.00
13	Clove, Nutmeg and Cinnamon	2.00	..
14	Arecanut—Procurement of seeds	1.25	..
15	Oil Palm—Production-cum-research	..	7.60
16	Integrated seed development scheme, Eruthampathy	5.00	..
	Total	173.75	32.80
<i>Group VI—Agricultural Education:</i>			
17	(a) Bacterial Unit	1.00	..
	(b) Namatology Laboratory	1.00	..
	(c) Horticulture Division	2.50	..
	(d) Plant Physiology Laboratory	1.00	..
	(e) Cytogenetics Research and Plant breeding	1.25	..
	(f) Cryptogamic Herbarium	0.75	..
	(g) Agricultural Statistics Division	2.00	..
	(h) Agricultural Economics Division	2.00	..
	(i) Repair workshops and Maintenance Section	1.00	..
	(j) Research in Parasitology, Insect Pathology and Biological Control of insect pests	1.25	..
	(k) Research on Toxicology and chemical control of insect pests	2.00	..
	(l) Study on non-insect pest, storage pests and their control	1.50	..
	(m) Research on insect biology, ecology and behaviour of insect pests	0.75	..
	(n) Micro-Nutrient Laboratory	2.00	..
18	Agricultural University	10.00	..
	Total	30.00	..

<i>Sl. No.</i>	<i>Head of Development</i>	<i>State sector outlay</i>	<i>Central sector outlay</i>
(1)	(2)	(3)	(4)
<i>Group VII—Agricultural Research:</i>			
19	Coconut	3.05	
20	Sesamum	1.50	
21	Bunchy-top disease of banana	1.85	
22	Improvement of vegetable crops	0.75	
23	Improvement of wastelands affected by salinity and alkalinity	2.50	
24	Rootwilt of coconut and yellow leaf disease of arecanut	0.85	
25	Co-ordinated I.C.A.R. Project	..	10.00
26	Co-ordinated Agronomic Experiments including simple fertiliser trials:	..	14.25
27	Co-ordinated Project for Rice (Research in rice)	10.00	40.00
	Total	20.50	64.25
<i>Group VIII - Extension Training and Farmers Education :</i>			
28	Training of Agricultural Personnel:	1.50	..
29	Multicrop demonstration:	..	32.45
30	Mobile soil testing laboratories and soil testing in private colleges:	12.50	..
	Total	14.00	32.45
<i>Group IX Agricultural Statistics</i>			
31	(a) National Index of Field Experiments	1.34	..
	(b) Construction of Index Number Series	0.78	..
	(c) Estimation of area under and production of minor crops	3.50	..
	(d) Pre-harvest estimation of crop acreages:	0.40	..
	(e) Improvement of Plantation Statistics	1.25	..

<i>Sl. No.</i>	<i>Head of Development</i>	<i>State sector outlay</i>	<i>Central sector outlay</i>
(1)	(2)	(3)	(4)
	(f) Strengthening of prices unit	3.75	..
	(g) Market Intelligence:	1.00	..
	(h) Statistical Unit:	1.00	..
32	Agricultural Research Statistics	2.63	..
	Total	15.65	..
<i>Group X—Intensive Cultivation Programme:</i>			
33	Yelah Programme:	100.00	..
34	Intensive Agricultural District Programme	20.00	..
35	Intensive Agricultural Area Programme	25.00	..
	Total	145.00	..
<i>Group XI—Land Development:</i>			
36	Kattampally Scheme:	2.00	..
37	Thanneermukkom barrage:	100.00	..
38	Wasteland reclamation in Cannanore:	50.00	..
39	Resettlement of landless agricultural labourers:	150.00	..
40	Preparation of records of rights	550.00	..
41	Re-survey of State:		
42	Administration of land reform measures	50.00	..
	Total	902.00	..
<i>Group XII—Consolidation of Holdings:</i>			
<i>Group XIII—Others:</i>			
43	Development of Central Orchard & Other Orchards:	3.75	..
44	Financial Assistance to Agri-Horticultural Society:	1.00	..
45	Fruit Preservation Unit:	1.25	..

<i>Sl. No.</i>	<i>Head of Development</i>	<i>State sector outlay</i>	<i>Central sector outlay</i>
(1)	(2)	(3)	(4)
46	Vegetable Cultivation in Vandiperiyar	5.00	..
47	Vegetable Production Centre, Alwaye		
48	Vegetable seed stores in District Headquarters:	1.00	..
49	District Agricultural Farm:	35.00	..
50	Agricultural information:	6.50	..
51	Krishi Karyalaya for housing the Directorates of Agriculture and Allied Departments:	5.00	..
52	Development of Spices Station, Neriamangalam:	7.50	..
53	Development of Pepper Research Station:	1.50	..
54	Development of Lemongrass Research Station:	1.50	..
55	Research in Ginger:	0.50	..
56	Cashew Plantation in New areas	19.90	..
57	Chingeri Development Scheme	2.50	..
58	Cocoa Development Scheme	5.00	..
59	Raising disease-free banana Sucker-Control of bunchy top disease	3.00	..
60	Improvement of horticultural Research Station, Ambalavayal	5.00	..
61	Home Science Wing	2.00	..
62	Workshops (training of Carpenter blacksmith)	2.00	..
63	Higher Education of Village level workers	0.50	..
64	Extension Training Centre (to Gramsevak)	1.50	..
65	Colonisation (a) Wynad	3.00	..
	(b) Attappady	6.40	..
	(c) High Range Colonisation Scheme	6.10	..
66	Reclamation of forests & kayal lands for paddy cultivation	50.00	..

<i>Sl. No.</i>	<i>Head of Development</i>	<i>State sector outlay</i>	<i>Central sector outlay</i>
(1)	(2)	(3)	(4)
67	Grow more food campaign in educational institutions	0.50	..
68	Spillover works	2.50	..
69	Bringing cultivable fallow land under food crops	5.00	..
70	Scheme for plantation of coconut, banana in Illithode	10.00	..
71	Rehabilitation of agricultural labour displaced by mechanisation	10.00	.
72	Scheme for Small Farmers Development Agency for Quilon		14.22
	Total	204.40	
	Grand Total	1700.00	143.72

1.2 MINOR IRRIGATION

1.2 Minor irrigation schemes assume special significance in a State like Kerala which has large tracts of arable land where major irrigation schemes are not considered feasible. Unlike major and medium projects the minor irrigation works bring benefits quickly and with considerably less capital outlay. They also do not involve the use of foreign exchange. Further, there are many pockets of land in the State where minor irrigation works alone are feasible. In certain other areas maximum utilisation is possible only through integrated development of different categories of minor irrigation works.

Class I, Class II and Lift Irrigation Schemes:

2. The total net area of land that can be brought under paddy cultivation in the State is about 14.00 lakh acres. By the end of the Fourth Plan the area anticipated to be covered by projects will be about 6.43 lakh acres (net). The minor irrigation Class I, Class II and Lift Irrigation Schemes together will benefit an area of 28,330 hectares (net). A provision of Rs. 550 lakhs is provided in the Fourth Plan for these schemes.

Establishment of River Pumping Unit:

3. In regions where the topography does not permit direct flow, irrigation water from rivers and streams has to be lifted into channels. One of the important items of the work connected with power lift irrigation is the installation of pumping sets. By installing pumping sets on the bank of perennial rivers and streams the water now running waste could advantageously be utilised for irrigating large areas of land forming compact blocks on either banks of the streams. This type of installation is costly and uneconomical for individual ryots as they may not possess enough land along the banks of the river or stream or they lack the means to purchase pumping units. It is, therefore, considered necessary that the Agriculture Department should undertake the installation of big size pumpsets on the banks of rivers or streams so that a group of cultivators can enjoy the benefits of adequate irrigation.

4. With the above object in view, one scheme was sanctioned in 1966-67 and is under implementation. During the Fourth Plan period it is proposed to establish 240 river pumping units in the State. One unit would consist of suitable number of pumpsets of the required specification. These pumpsets are capable of irrigating a contiguous area of paddy fields. The total cost of the scheme is Rs. 80.00 lakhs. The area expected to be benefited is 4,800 hectares.

Deepening the existing Irrigation Tanks in the State and Providing them with pumpsets:

5. There are about 3,000 irrigation tanks in the State, most of them partially filled up by silt and earth. This obviously affects the capacity for storing water for irrigation. These tanks need to be cleaned, deepened and strengthened. As the total area benefited by these tanks will be considerable this scheme envisages Government helping the renovation of these tanks in a big way. The cost of renovating the tank will be shared by the Government and Panchayats in the ratio of 2:1. The maintenance of the tanks and the operation of the pumpsets will be the responsibility of the concerned Panchayats. The cost of renovating 200 tanks at Rs. 0.50 lakh per tank including pumpsets amounts to Rs. 100.00 lakhs.

Subsidy for wells and Tanks in sugar factory areas:

6. Lack of irrigation facilities is the main handicap to the sugarcane growers in the State. With a view to providing assured irrigation facilities, financial assistance by way of subsidy was extended to the cultivators for construction of new wells and tanks during the Third Plan period. Pumpsets were also distributed on hire purchase system at concessional rate. In several areas wells are the sole means of irrigation. It is proposed to issue loans and grants to the sugarcane growers in the sugarcane factory areas for construction of new wells and tanks. A loan of Rs. 10,000 or an amount equal to the actual cost of construction of a well as estimated by competent authority whichever is less will be issued. Subsidy of Rs. 1,250 per well or tube or 25% of the actual cost of construction whichever is less is also proposed to be granted as an incentive to take up the construction work. A provision of Rs. 25.00 lakhs is made in the plan for the scheme.

Construction of Permanent Engine Tharas (bases) and Provision of Pumpsets for the farmers of Kuttanad:

7. The scheme is intended to subsidise the initial dewatering charges. M/s Syndicate Bank Ltd., have agreed to advance the necessary loan in this behalf spread over a period of 5 years for constructing permanent engine tharas and providing the farmers with engines and pumpsets.

8. Government has already been subsidising the first dewatering charges of Rs. 24 lakhs to the extent of 50%. It is estimated that almost this entire subsidy amount of Rs. 12 lakhs will be sufficient towards payment of electricity charges for one cropping season. A total amount of Rs. 60 lakhs is included in the Plan for giving subsidies to farmers on this account.

Ground water investigation and development:

9. Tube wells and dugwells will be built in places needing them. This will form an integral part of the scheme for exploration of potential ground water source areas for extraction of water. Work has already been initiated in the previous plan period. An amount of Rs. 25 lakhs is provided for this programme.

Free supply of pumpsets to Panchayats:

10. A provision of Rs. 85 lakhs is included in the Plan for this.

MINOR IRRIGATION

Scheme-wise details of outlay proposed in the Fourth Plan (1969-74)

		(Rs. in lakhs)
<i>Schemes</i>		<i>State Sector</i>
1. Minor Irrigation Class I		200.00
2. Minor Irrigation Class II		250.00
3. Lift Irrigation		100.00
4. Establishment of river pumping unit		80.00
5. Scheme for deepending the existing irrigation tanks in the State and providing them with pumpsets		100.00
6. Subsidy for wells and tanks in sugar factory areas		25.00
7. Scheme for the construction of Permanent Engine Tharas (bases) and provision of pumpsets for the farmers of Kuttanad area (Punja Dewatering)		60.00
8. Scheme for Groundwater Investigation and Development		25.00
9. Subsidy for new wells and tanks		25.00
10. Free supply of pumpsets to Panchayats		85.00
		950.00

1.3 SOIL CONSERVATION

Soil conservation programmes have an important role to play in augmenting agricultural production in the State. The peculiar topographical features of Kerala and the lack of proper soil management have accelerated soil erosion in the State. Besides adversely affecting agricultural production, erosion leads to silting reservoirs of hydel and irrigation projects, rendering them progressively ineffective. No authentic soil conservation survey has been made so far. It has been estimated that about 20 lakh acres are highly vulnerable to soil erosion hazards. The construction of permanent ring bunds will provide the low lying areas permanent protection against inundation, thereby improving the prospects of multi-cropping in extensive paddy fields. During the Third Plan against the target of Rs. 120 lakhs, a sum of Rs. 112.07 lakhs was spent on soil conservation.

2. The schemes in the Fourth Plan envisage the construction of contour bunds at specified vertical intervals on hilly agricultural lands forming complete or atleast self-defended water-sheds, construction of permanent outer bunds with granite masonry around the selected padasekharams of Kayal, Kari, Kole and otherwise water-logged areas, effective control and prevention of soil erosion from the hilly cultivated lands, establishment of a Soil Conservation Research-cum-Training Centre, conduct of a detailed soil and land use survey of the State which will help to prepare soil maps of Kerala. Under the Centrally sponsored schemes it is proposed to undertake soil conservation in water-sheds of the more important and major hydel and irrigation projects of the State and to conduct a detailed survey of the I.A.D.P. area of Palghat and Alleppey Districts for assessing the economic use of soil and for preparing detailed soil survey report.

The following schemes will be implemented during the Fourth Plan.

Soil and Water Conservation on Agricultural Lands:

3. The scheme envisages construction of permanent bunds with granite masonry around selected padasekharams in Kayal, Kole and Kari lands. The primary objects of the scheme are to stabilise the existing single cropped areas and to convert them, wherever possible, into double cropped areas. The additional food production expected is one tonne of paddy annually for every acre benefited by the scheme.

4. The scheme also contemplates the construction of contour bunds with dry rubble packing at specified vertical intervals, on

hilly sloping lands highly vulnerable to soil erosion losses, under seasonal cultivation of food crops, especially tapioca. The additional food production anticipated is one tonne of tapioca for every acre worked, besides providing permanent improvement to the land and employment to a large number of people. The physical target set for the Fourth Plan is 30,000 hectares.

Reclamation of Saline, Alkaline and Water Logged Lands:

5. Detailed investigation and experiments in both Kuttanad and Kole areas in the State so as to maximise production in these regions are contemplated under the scheme. The area to be covered by the scheme is 5,000 hectares.

Soil Conservation Research:

6. The existing Soil Conservation Research Station at Konni will be developed into a full-fledged Demonstration-cum-Training Centre.

Soil Survey, Investigation and Planning:

7. The scheme aims at undertaking a detailed survey and classification of the soil of Kerala to suggest better land use planning and most apt manuring practices for the varied soil tracts of the State. The scheme will cover a total area of 375,500 hectares.

Protective Afforestation—Soil Conservation in forest areas:

8. This scheme contemplates the adoption of soil conservation measures, particularly the afforestation of highly denuded areas of the State. This work is to be undertaken by the Forest Department with the assistance of the Soil Conservation Department. An area of 5,000 hectares is expected to be covered under the scheme.

Soil and Water Conservation in Irrigated Lands:

9. The object of the scheme is to increase the yield per acre in the command of the major, medium and minor irrigation projects by Soil Conservation and Land Development measures. The works will be executed after detailed investigation and preparation of work plan. The required machinery and equipment will be obtained from the Agro-Industries Corporation. The scheme will benefit an area of 1,000 hectares.

CENTRALLY SPONSORED SCHEMES

Soil Conservation in Water sheds of River Valley Projects:

10. Effective Soil Conservation measures in the catchments of major river valley projects to reduce the silt land in the reservoirs has become imperative. At present we have four investigated schemes for the catchments of Idikki, Neriamangalam, Kundah portion of Kerala and Malampuzha. The above schemes should, with advantage, be taken up under Centrally Sponsored Schemes in the Fourth Plan and adequate provision made by the Centre.. It may be mentioned that the actual field work in the portions of the catchment of Kundah Hydro-Electric Project located within the Madras State has already been taken up during the Third Plan as a Centrally Sponsored Scheme.

SOIL CONSERVATION

(Outlay Rs. in lakhs)

<i>Sl No</i>	<i>Scheme</i>	<i>State Plan</i>	<i>Central Sector</i>
1	2	3	4
1.	Soil and Water Conservation on Agricultural Lands	225.00	..
2.	Engineering Measures—Reclamation of Saline, Alkaline and Water logged areas	42.00	..
3.	Research	10.00	..
4.	Soil Survey, Investigation and Planning	5.00	..
5.	Protective Afforestation—Soil Conservation in Forest areas	10.00	..
6.	Soil and Water Conservation in irrigated lands	4.00	..
7.	Soil Conservation in Water sheds of River Valley Projects	..	115.00
8.	Soil Survey in I. A. D. P. areas	4.00	..
Total		300.00	115.00

1.4 AYACUT DEVELOPMENT PROGRAMME

Nil.

1.5 ANIMAL HUSBANDRY

Animal Husbandry which is one of the least developed sectors in the economy of Kerala offers considerable scope for development. The average lactation yield of cows and buffaloes in the State is very low when compared to the other parts of the country. This is mainly due to the poor genetic material available locally and the dearth of local resources in essential feeds and fodder. The per-capita availability of milk at present is 50 ml. (less than 2 oz.) per day as against the all-India average of 140 ml. (about 5 oz.) The extremely poor quality of live-stock in Kerala highlights the urgent need for developing Animal Husbandry as a priority in the State's development plan. The live-stock can be improved either by selective breeding or by mass upgrading. Selective breeding would imply a location based programme with rigid norms for selection. Useless animals must be disposed of without causing any financial loss to the owners.

2. Animal Husbandry is a subsidiary occupation of the agricultural population. The development in this field will help to augment the income of the rural population. The present system of milk distribution in the rural areas is defective and results in considerable wastage. Unless this is made efficient the development effort will not have the desired impact on the income of the people. Therefore, any programme for the development of Animal Husbandry should also provide for improvement in the organisation for marketing, storage and distribution.

3. Another objective of the Fourth Plan will be to strengthen veterinary hospital and dispensary facilities in the State. Efforts will be made to extend veterinary aid to all Districts more or less to a uniform level. Special emphasis will be laid on control of epidemics.

4. A summary of the achievements under Animal Husbandry programmes during the first three Five Year Plans is given below:

- (i) It has been possible to cover only 25% of the breeding cattle population through the Key Village Blocks and Artificial Insemination Centres upto the Third Plan period.
- (ii) The progress made in the matter of introducing more milk in the native cows by the process of upgrading with Sindhi and Murrah breeds has not been sufficient to meet the increasing demand for milk.

- (iii) The programme of selective breeding with Malabar goats and upgrading of the indigenous stock for meat and milk qualities by a process of mixed breeding with selected strains has yielded promising results.
- (iv) A scheme for the establishment of a bacon factory in the Public Sector has been taken up. This, when commissioned, will give a fillip to piggery development in the State.
- (v) Poultry development works have succeeded in improving the quality of the State's poultry.
- (vi) Only 35% of the target aimed at for providing one Veterinarian for each of the 923 Panchayats has been achieved.

5. In order to promote Animal Husbandry activity in Kerala, the Fourth Five Year Plan will aim at filling up the deficiencies from which it had suffered during the past. The programme for the development of Animal Husbandry during the next Plan may be drawn up against a long term perspective. The Plan aims at raising the per-capita availability of live-stock products considerably over the Plan period. A price policy has to be formulated which would assure an incentive to the producers to increase production. Special emphasis will be given for the development of poultry and for the upgrading of livestock in general. Animal Husbandry development schemes during the Fourth Plan will include supply of exotic breeds of livestock to livestock Co-operative Societies and private farmers so that the income and standard of living of the people who are engaged in this sector will be raised.

6. There is considerable scope for poultry and piggery development in the State. Every effort will be made to develop this sector of the economy so as to double the present production in these sectors during the Fourth Plan period.

7. Emphasis will be given to increased production of protective foods of animal origin during the Fourth Plan period. The plan for cattle development would cover the breeding needs of over 50% of the cattle population. This will make it possible to achieve a per capita daily availability of 5 oz. of milk by the end of the Fourth Plan period.

8. Dairy development is an essential part of animal husbandry development. It will not be conducive to development to keep animal husbandry and dairying in two water tight compartments. The Department of Dairy Development is now concerned more with milk collection and distribution than with dairy development. Proper co-ordination and integration of the various activities under animal husbandry could be achieved by

making Dairy Development a wing of the Animal Husbandry Department under the charge of a Senior Officer of the Department. Again, milk distribution has to be integrated with dairy development by making the Officer-in-charge of each milk scheme responsible for intensive development of dairying in the captive areas. If this is not done the milk supplies will fail to catch up with the increasing demand.

9. The potential for poultry development in the State is unlimited. Therefore, several schemes for poultry development will be implemented during the Fourth Plan. Facilities for organising poultry farms in the co-operative and private sectors will be provided in the Fourth Five Year Plan.

10. To sum up, the strategy of the Fourth Five Year Plan in respect of animal husbandry will be to aim at the maximisation of milk production so as to raise the per-capita availability of milk to 65 ml. and to increase the tempo of development in the fields of poultry and piggery.

11. A broad classification of the schemes under various heads and outlay proposed under each of them are given below:

Sl. No.	Name of Scheme	(Cost Rs. lakhs)
1.	Livestock Development	141.10
2.	Poultry Development	64.55
3.	Pig Development	29.00
4.	Veterinary aid	32.00
5.	Veterinary Education and Research	14.47
6.	Other Schemes	72.38
Total		353.50

Livestock Development:

12. The emphasis in the livestock development programme is for raising the milk-yielding capacity of the cattle and buffaloes by upgrading the local cows with high yielding exotic and indigenous breeds. One of the major schemes proposed is the establishment of an Intensive Cattle Development Block in the State. This is a scheme costing Rs. 66.00 lakhs which aims at all round development of cattle in a selected area comprising parts of Alleppey, Kottayam and Ernakulam Districts and covering about one lakh breedable cows. A lump sum provision of Rs. 50 lakhs is made for the Indo-Swiss Project. A Jersey Farm with a basic herd of 300 adult cows will be started at a cost of Rs. 25.00 lakhs.

Poultry Development:

13. The strategy for Poultry Development in the Fourth Plan is to produce and distribute on a large scale, chicks of improved breeds to private poultry farmers, and to establish processing units for poultry products. The major schemes under the poultry development programme are those for expansion and development of the Central Hatchery, establishment of an Egg Powder Factory and subsidised distribution of chicks to scheduled caste and tribe families.

Pig Development:

14. The main scheme under pig development is the establishment of a Bacon Factory. Other activities envisaged relate to the development of pig breeding in selected areas in order to feed the Bacon Factory. A provision of Rs. 29.00 lakhs is made for the programme; Rs. 10.00 lakhs for revolving fund and the rest for other purposes.

Veterinary Aid:

15. Schemes for rinderpest eradication and establishment and expansion of Veterinary Hospitals and Dispensaries, and establishment of Clinical Laboratories are the highlights of the Veterinary Aid Programme in the Fourth Plan. Under the latter scheme important will be effected in the District Head Quarters, Veterinary Hospitals and Veterinary Dispensaries at a cost of Rs. 20.00 lakhs.

Veterinary Education, Research and Extension:

16. The programme for veterinary education and research envisages starting of post-graduate courses in certain branches of Veterinary Science.

Other Schemes:

17. This group comprises conversion of District Livestock Farm, Kodappanakunnu, into an economic demonstration unit as a Mixed Farm, Improvement of District Livestock Farm, Triruvazhamkunnu and Cattle Feed Plant, Malampuzha. These schemes together cost Rs. 72.00 lakhs.

18. A list of the schemes and the financial outlay proposed for each are furnished in the following statement.

ANIMAL HUSBANDRY

Fourth Plan Outlay

(Rs. in lakhs)

<i>Sl. No.</i>	<i>Name of Scheme</i>	<i>State</i>	<i>Centre</i>
(1)		(2)	(3)
I. <i>Livestock Development including Cattle Breeding:</i>			
1.	Intensive Cattle Development Block	66.00	..
2.	Expansion and Establishment of Key Villages	0.10	..
3.	Indo-Swiss Project	50.00	..
4.	Establishment of a Jersey Farm with basic herd of 300 adult females	25.00	..
	Total	141.10	
II. <i>Poultry Development</i>			
5.	Egg Powder Factory	20.00	..
6.	Expansion of Central Hatchery	15.00	..
7.	Collection and Marketing of eggs	1.05	..
8.	Poultry Dressing Plant	0.50	..
9.	Expansion of Government Poultry Farms	13.00	..
10.	Poultry Development among Scheduled Tribes and Economically Backward Classes	15.00	..
	Total	64.55	
III. <i>Pig Development</i>			
11.	Pig Development & Bacon Factory	29.00	..
	Total	29.00	

<i>Sl. No.</i>	<i>Name of Scheme</i>	<i>State</i>	<i>Central</i>
IV. <i>Veterinary Aid</i>			
12.	Rinderpest bradication	10.00	..
13.	Improvement to Veterinary Hospitals & Dispensaries	20.00	..
14.	Establishment of Clinical Laboratories, Disease and Intelligence Service and T. B. Control	2.00	..
	Total	32.00	
V. <i>Veterinary Education, Research & Extension</i>			
15.	Training and Post-graduate Courses in Veterinary College, Meat Technological Laboratory	4.47	..
16.	Establishment of an Institute of Veterinary, Public Health, Preventive Medicine etc., and modernisation of slaughter houses	10.00	
	Total	14.47	
VI. <i>Other Schemes</i>			
17.	Conversion of District Live-stock Farm, Kodappanakkunnu, into a Demonstration Unit	30.00	..
18.	Improvement of District Live-stock Farm, Thiruvazhumkunuu	22.00	..
19.	Cattle Feed Plant, Malampuzha	20.00	..
20.	Spill over works relating to old schemes	0.38	..
	Total	72.38	
	GRAND TOTAL	353.50	

1.6 DAIRYING AND MILK SUPPLY

The Fourth Plan Programme for Dairy Development gives importance to both production and distribution aspects of dairying. The total outlay on Dairy Development in the Plan is Rs 131.50 lakhs. The general policy regarding processing and marketing is to continue the work of starting milk supply schemes in the major towns and cities of the State. The measures for promotion of milk production include dairy extension service, provision of loan finance for purchase of milch cattle, fodder development and establishment of State managed dairy farms.

Milk Supply Schemes:

2. New Milk Supply schemes will be started in Quilon, Alleppey, Trichur and Cannanore. The Milk Supply schemes in Kottayam, Ernakulam, Calicut, Palghat and Trivandrum will be consolidated. It is also proposed to start 10 milk collection and chilling plants for utilising rural milk for urban distribution schemes.

Development of Milk Production:

3. Rural Dairy Extension Service Units will be started in areas which have the potentialities for milk production. A provision of Rs. 20.00 lakhs is made for distribution of loans to dairy farmers for purchase of high yielding milch cattle.

4. An abstract of the provision required for the various schemes proposed, is given below:

(Rs. in lacks)

Sl. No.	Name of Scheme	State	Central
A. MILK SUPPLY SCHEMES			
1	Kottayam Milk Supply Scheme	3.00	..
2	Alleppey Milk Supply Scheme	12.00	..
3	Trivandrum Milk Supply Scheme (Expansion and Co-ordination)	12.00	..
4	Ernakulam Milk Supply Scheme (Co-ordination)	5.00	..
5	Calicut Milk Supply Scheme	3.00	..
5	Palghat Milk Supply Scheme	3.00	..
7	Quilon Milk Supply Scheme	12.00	..
8	Trichur Milk Supply Scheme	12.00	..
9	Cannanore Milk Supply Scheme	12.00	..
B. OTHER SCHEMES			
10	Fodder Cultivation	14.50	..
11	Establishment of Milk Colonies/Dairy Units		
12	Rural Dairy Extension Service		
13	Rural Dairy Centres	20.00	..
14	Cattle Purchase Loan	20.00	..
15	Training of Personnel	0.99	..
16	Dairy Development Staff	2.00	..
17	Spill over Works relating to old schemes	0.01	..
Total		131.50	..

1.7 FORESTS

The National Forest Policy enunciated in 1952 lays down that "India as a whole should aim at maintaining one third of its land under forests". But in actual terms, forests cover only 19 per cent of the total geographical area of the country. For Kerala, the area under forests, however, forms 28 per cent of the total land area. About 20 per cent of these are under private ownership. Though the State maintains a good part of its land under forests, the actual growing stock of merchantable species is only 200 cm. per hectare.

2. The development of the forestry sector was begun with the Second Five Year Plan. Extensive cultivation of cashew in 4280 hectares, timber plantation in 3383 hectares and softwood plantation in 3571 hectares was undertaken. Total financial achievement was Rs 60.76 lakhs. Large scale cultivation of fast growing species of industrial importance was not attempted. Further, for want of proper communications, 20 per cent of the natural forests remained economically unexploitable.

3. In the Third Plan, however, a beginning was made by introducing various development schemes, viz., economic plantations, consolidation of forests, rehabilitation of degraded forests and forest protection. The most important physical achievements were raising of teak in 12453 hectares, fast growing species in 6527 hectares, softwood plantations in 6238 hectares and fuel plantation in 349 hectares. The plantation of fast growing species is in exploitable stage now.

4. During the Annual Plan periods extended cultivation of Eucalyptus, Teak and Bamboo was carried out. Enrichment of natural ever-green forests, giving importance to the timber species suitable for plywood was also attended to.

5. All the schemes introduced during the earlier plans however could cover only a small proportion of the forest resource potential. In fact the forest wealth of Kerala is yet to be tapped on a wide scale by the application of scientific practices.

6. The important objective of the Fourth Plan will be to improve the existing natural forests and to increase the extent of plantation of various species of industrial importance to meet the demand of raw materials required for forest based industries and other constructional purpose.

7. There is an ever-increasing demand for cellulosic raw materials for rayon and paper industry. Until now indigenous species alone was used for the purpose. In order to meet the immediate and future requirements of raw materials, expansion of cultivation of fast growing species of Eucalyptus and Pines is very necessary. It

is proposed to introduce these species in an area of 800 hectares during the Plan period and the final outlay proposed for this scheme is Rs 135.00 lakhs.

8. As the United Nations Report "Science and Technology for Development" has pointed out:—

"Before an effective forest policy can be formed Government must have a fairly clear idea of the extent and nature of the country's forests, the physical possibilities of their economic exploitation and the size of the potential home market and of the possibilities for export of forest products".

To have a complete inventory of the forest resources in the State, a 'Forest Resources Survey' is proposed to be taken up immediately. The objective of this scheme is to estimate the extent and nature of the forests, the actual growing stock, the volume of increment of the timber, the physical possibilities of their economic exploitation and the quantitative and qualitative estimation of minor forest produce. The survey will be oriented towards planning the expansion of existing forest industries based on available forest resources and industrial plantations established for this purpose. For an integrated forest management the requirements of raw materials, existing plant capacities, the market trend and the future trend of wood requirements will have to be studied. An appropriate analysis of data will provide much information needed for critical decisions on resource use as well as decisions dealing with many micro aspects. The outlay proposed for this scheme is Rs 10.00 lakhs. A separate Statistical Unit is also proposed to be established for this scheme.

9. About 20% of the natural forests in Kerala is at present inadequately served with communication, with the result that the extraction of major forest produce is difficult and expensive. If these forest areas are opened up with a good road system capable of use throughout the year, the exploitation of the resources and a proper development programme of the forests could be taken up in the Fourth Plan. The outlay proposed for this scheme is Rs. 25.00 lakhs.

10. In the interest of adequate preservation of forest wealth steps will have to be taken to acquire the private forests and bring these within a unified forest management under the control of the Forest Department. A token provision of Rs 0.50 lakhs is provided in the Plan for this.

11. The demand for timber suitable for plywood is very great and with the rapid expansion of the industry there will be a complete breakdown of supply of timber.

12. The raw materials are available from the natural evergreen forests, which are degraded to a considerable extent due to biotic

factors. The recommended practice is to enrich the natural forests both by natural and artificial methods and to carry out tending operations. The financial outlay provided for this scheme is Rs. 3.00 lakhs.

13. It is proposed to undertake research on certain important silvicultural problems. Many species of Eucalyptus and Pines are found to be suitable in our region. So far, only one species of Eucalyptus has been tried as a large scale plantation. Many other species of Eucalyptus deserve special attention. Suitability of other species to grow on a plantation scale is also to be studied.

14. The institutional frame work for the practice of improved methods of timber extraction and marketing will be provided by the setting up of a Timber Corporation.

15. In the Fourth Plan special emphasis will be placed on schemes which enhance the natural forest resources to the maximum, the production of abundant quantity of forest products and the establishment of artificial plantation of fast growing species of industrial importance with a view to providing the required type of raw materials for various forest based industries.

Scheme-wise details of Plan Outlay proposed

(Rs. in lakh:)

Sl. No.	Name of Scheme	Fourth Plan outlay	
		State	Central
(1)	(2)	(3)	(4)
1	Plantation of quick growing species (Eucalyptus)	135.00	..
2	Economic Plantation (Teak)	69.00	..
3	Fuel Plantation	7.00	..
4	Minor Forest Produce	30.00	..
5	Sandal Wood	2.50	..
6	Anjily		
7	Andaman Paduk		
8	Balsa		
9	Rose Wood		
10	Bamboos	15.00	..
11	Red sanders		
12	Soft wood		
13	Forest Resources Survey including Statistical Cell and Working Plans	..	10.00
14	Communications (Roads)	25.00	..
15	Cultural Operations for Plantations	90.00	..
16	Rehabilitation of Degraded Forests	3.00	..
17	Buildings	20.00	..
18	Consolidation of Forests	7.00	..
19	Acquisition of Private Forests	0.50	..
20	Forest Corporation	0.05	..
21	Conservation of Nature	10.00	..
22	Training of staff	5.00	..
23	Amenities of Labour	2.00	..
24	Forest Research	2.50	..
25	Forest Publicity	2.00	..
26	Statistical Cell	0.50	..
27	Timber operation	2.00	..
28	Forest and Fire protection	15.00	..
29	Plant protection	1.00	..
30	Intensification of Management	1.95	..
Total		446.00	10.00

FISHERIES

The vast expanse of the marine waters of Kerala, with some of the well known fishing grounds of the world, offers immense scope for development. All the planned efforts in the past could touch only a fringe of our fishery resource potential. The off shore waters lying beyond 15 to 25 Km from the coast yet remain outside the domain of commercial exploitation. The tapping of these virgin resources will provide large scale employment and better income to the people. Already a Master Plan for the development of Kerala fisheries has been drawn up. The Plan envisages a total outlay Rs. 306 crores to be invested over a period of 20 years beginning with the Fourth Five Year Plan. But the extent to which the aims and objectives outlined in the Master Plan can be achieved depends upon the availability of resources and readiness of the Governmental assistance in securing proper equipment and directing purpose-oriented research.

Fisheries in the economy of the State

2. Fisheries occupy an important place in the economy of the State. While the heavy pressure of population on land restricts the per capita availability of arable land, the State's fishery resources remain abundant. The State accounts for one fourth of the total fish production in India. Its share in the all India marine fish catches is about 40 per cent. Kerala accounts for as much as 85 percent of the total export earnings from fishery products. Like milk, meat and eggs, fish is rich in protein. Also it is a valuable foreign exchange earner. Above all, fisheries provide a field of vast employment potential. The full exploitation of these natural bounties calls for a sound programme for locating and harvesting the stock.

3. Planning in the past has helped the emergence of fisheries as a growing export oriented industry. This has been made possible through mechanisation of fishing and modernisation of processing techniques. Feeding the foreign markets with products like canned and frozen shrimp, the fisheries secure valuable foreign exchange to the country. From Rs. 1.79 crores in 1960-61, the total foreign exchange earnings in respect of fishery products of Kerala rose to Rs. 20.25 crores in 1968-69. There was a temporary slump in the export market on account of a boom in shrimp production in U.S.A. in 1967-68. But the industry maintained its steady growth through diversification of exports to new markets. The exploitation of the offshore waters in a rationalised manner will provide the necessary impetus to the further growth of the shrimp industry in Kerala.

4. Fishing is the traditional occupation of over 3 lakhs of people (1.5 per cent of the total population of the State). The fishermen belong to the weaker sections of the society, whether they are Hindus, Christians or Muslims. The percapita income of the fishermen is less than half of the percapita income calculated for the State as a whole. From an enquiry conducted by the Indo Norwegian Project in 1959, it was found that 58 per cent of the fishermen households have investment in the industry of less than Rs. 500, 20 per cent between Rs. 500 and Rs. 2,000 and the rest over Rs. 2,000. Hence, there is the need for a thorough reorganisation of the fisheries plan of the State in respect of the technique of production, organisation and marketing to enable the fishermen to raise their economic and social conditions. The fishermen now exercise very little control over the marketing, processing and exporting of their own catches. The export oriented shrimp processing industry has grown outside their realm. Nearly all the fishermen continue to be at the mercy of the middlemen. The lacuna of a well knit co-operative organisation covering the entire fisherfolk, especially in the field of marketing, is mainly responsible for the poor economic conditions of the fishermen. Therefore, any programme of fisheries development involves a certain amount of human element deserving sympathy and assistance.

5. Modernisation of fisheries will usher in new avenues of employment for a large mass of skilled and unskilled labour. Not only members of fishermen community, but also others will share the benefits of fishery development.

Fish production:

6. Kerala produces about 3.5 lakh tonnes of fish, the bulk of which is accounted for by sardine and mackerel. In the past, the annual marine fish landings showed cyclical variations, the period of a cycle extending to 3 or 4 years. The fluctuations in the landing of sardine and mackerel were responsible for the phenomenon. But since 1962, the landings have shown a steady increase. The absence of the down swing which should normally have set in 1965 or 1966 is directly attributable to the planned development of fisheries. The introduction of mechanised fishing crafts and modern fishing gear has increased fishing efficiency. As against the age old ways of waiting for shoals to come to them, the fishermen today go after new grounds and new shoals.

Resources:

7. The marine resources of Kerala are vast and offer immense potential for development. The continental shelf with an average width of about 50 KM has a fishable ground of nearly 25,000 KM². Of this, the area subject to intensive fishing is confined to the

inshore belt of 15 KM from the shore. Since the beginning of 1960's shrimp trawling is carried out extensively in these waters. The region lying beyond the inshore belt remains practically unexploited. The experimental and exploratory fishing operations conducted by various agencies like the Government of India Offshore Fishing Station, the Indo-Norwegian Project and the Indian Ocean Expedition sponsored by the F.A.O. have indicated the offshore waters to be of high biological productivity having rich fishing grounds, available for commercial exploitation. Further, to the South-West corner of India lies the famous fishing ground 'Wadge Bank' which is considered to be rich in bottom dwelling perches and other fishes. The coastal belt up to 40 fathoms is already established as a rich prawn bed. The recent investigations have shown that regions up to 200 fathoms, far beyond the continental shelf marked by the 100 fathoms line, will sustain certain other varieties of prawns that are not so far exploited. The seas around Laccadive and Minicoy Islands are highly potential for tuna fisheries.

8. The inland resources compared to the marine are limited. They comprise an extensive chain of backwaters, a few lakes, reservoirs and ponds and a number of small rivers.

9. Fishing industry provides employment for over a lakh of fishermen as fishing crew and an equally large number in the processing and allied establishments. The fishermen of Kerala are very proficient in the art of fishing and operate the indigenous crafts and gear with great efficiency. They are quick in acquiring new skill required for the operation of modern craft and gear. The various fishermen training centres in the State and the Fisheries Operative Institute at Ernakulam train the fishermen in the use and operation of modern fishing vessels. Though the availability of master fishermen and fishing hands is in plenty, there is a real dearth of qualified skippers to man large vessels.

Review of the developmental efforts in the past:

10. The fishery development programmes under the First and the Second Five Year Plans had been very meagre both in outlay and target. Against the planned outlay of Rs. 15 lakhs for the First Plan, the amount spent was only Rs. 2.74 lakhs. During this plan period, three research stations were opened. Under the Indo Norwegian Project, a Boat Building Yard at Sakthikulangara was established.

11. In the Second Plan, as against a targeted provision of Rs. 93.37 lakhs, the expenditure incurred was Rs. 64.36 lakhs. During the period, a boat building yard at Vizhinjam and three ice plants one each at Kayamkulam, Cochin and Blangad were established. The Neendakara Ice Factory and Refrigeration Plant was also constructed during the period. 430 fishermen were trained

in mechanised fishing. Fishermen Co-operatives for production and marketing were separately organised. 38 Malsya Ulpadaka Co-operative Societies and 2 Regional Marketing Societies were set up. Modernisation in fish marketing through the use of ice and insulated vans was attempted systematically. Export earnings from marine products registered a phenomenal increase during the period.

12. The Third Plan Schemes comprised mainly mechanisation of fishing crafts, construction of fishing harbours, establishment of ice plants and cold storages and supply of fishing requisites. As againsts the plan provision of Rs. 450 lakhs, the actual expenditure was Rs. 334.01 lakhs (75 percent). The shortfall in the expenditure was mainly due to the delay in taking up the fishing harbour schemes and the difficulty in obtaining foreign exchange for marine diesel engines for the mechanisation of fishing crafts and for procuring modern fishery requisites, which together constituted 61 percent of the total outlay for the Third Plan.

13. The different schemes that were implemented in the Third Plan rendered the fishing industry of the State to usher into a lucrative field for investment. The development of new fisheries with economic viability, the potential for commercial exploitation of the offshore fisheries, the availability of extensive prawn belt in the inshore waters and a prosperous foreign trade in processed sea food products have been the major features of the industry at the end of the Third Plan.

Approach to the Fourth Plan:

14. The development of fisheries in Kerala had reached a stage where it is imperative to plan the future exploitation of fishery resources of the seas, backwater and inland water with a long term perspective. A Master Plan for fisheries development covering a period of 20 years has been drawn up in this direction. The Master Plan envisages an outlay of Rs. 306 crores leading to a five fold increase in production and employment for about 2.91 lakhs of people by 1989.

15. In consonance with the Master Plan the approach in the Fourth Plan is mainly to intensify fishing efforts in the inshore waters and at the same time to organise in a planned way the exploitation of offshore regions. In the public sector, mechanised boats will be issued to fishermen cooperatives while the Kerala Fisheries Corporation will be provided with trawlers for organising offshore fishing at different potential centres. The whole scheme will work as several integrated projects. Each project will have a fleet of fishing vessels besides shore facilities for the proper handling and processing of the fish catches. Harbour and other infrastructure facilities will be provided at all centres to operate

the project successfully. The new approach will produce a greater impact on the development of fisheries. The pilot fisheries project sponsored by the Indo-Norwegian Project at Neendakara, a striking example of an integrated project has not only helped modernisation of the fishing industry but also improved the living conditions of the fishermen.

16. All efforts will be made to promote further the export of fish products through the Kerala Fisheries Corporation and other established trade channels. The working of the Kerala Fisheries Corporation will be thoroughly streamlined to improve its operational efficiency. For swift and efficient distribution of fish in the lame markets, fishermen co-operatives will be organised in a more comprehensive manner. As it is the marketing cooperatives which ensure a fair return and better living standard to the fishermen in general, great stress will be laid on the revitalisation and reorganisation of these cooperatives on sound lines.

17. The Fourth Five Year Plan for Fisheries envisages targets of 5.30 lakh tonnes of fish production and Rs. 50 crores of export earnings at the end of the Plan. The increase in fish production is to be achieved through the introduction of 800 boats and 6 trawlers in the public sector and 800 boats and 100 trawlers expected in the private sector.

Integrated fisheries projects:

18. The fish production in Kerala is about 3.5 lakh tonnes. By the end of the Fourth Plan, the programme in the public sector is to raise production to 4.30 lakh tonnes. In the development of marine fishing the scheme is to introduce mechanised boats of below 50 feet in length and trawlers of above 50 ft. length. The production potential of fish of a mechanised boat is 90 tonnes per annum while that of a big trawler is about 300 tonnes. The following schemes will be implemented as integrated fishery projects at Vizhinjam, Neendakara, Cochin, Azhikode, Ponnani, Beypore, Thalai, Mopla Bay and Baliapatam.

The schemes are:

- (i) mechanised fishing
- (ii) trawler fishing
- (iii) Boatyards and service stations
- (iv) Ice plants and cold storages
- (v) training centres
- (vi) Roads and
- (vii) Distribution of fish

19. Already development works have been started at Vizhinjam, Azhikode, Ponnani, Beypore, Mopla Bay and Baliapatam. The Vizhinjam harbour is under construction while the Mopla Bay is nearing completion. At Cochin, steps have been taken for providing fishing harbour facilities by the Government of India. Harbour facilities will be provided in all the Centres selected for the projects. At Neendakara and Beypore dredging will be necessary for the safe entry and egress of vessels. Adequate provisions for harbour facilities and dredging are included in the Fourth Plan under the Central Sector.

20. The shore installations comprise ice plants and cold storage service stations and slip ways and marketing facilities including provisions for approach roads. In order to handle the increased fish catches and process the exportable species, ice plants with a total capacity of 1,500 tonnes/day and freezing plants with a total capacity of 500 tonnes/day will be set up. An aggregate outlay of Rs. 886.80 lakhs is provided in the State sector for the development of the nine projects.

21. The foreign exchange earnings from the export of marine products stood at Rs. 20 crores in 1968-69. This is expected to rise up to Rs. 50 crores at the end of 1973-74. The public sector activities will account for 40 percent (Rs. 12 crores) of the additional foreign exchange earnings.

Inland fisheries:

22. During the Third Plan, several major reservoirs in the State were stocked with fingerlings. This stocking programme will be continued during the Fourth Plan period. Intensive stocking of all ponds and tanks with mud fishes and exotic varieties also be attempted. The rivers too will be stocked with quick growing varieties of carps. A sum of Rs. 25.00 lakhs has been provided for the development of the fresh water and estuarine fisheries.

Supply of fishery requisites:

23. The programme envisages an outlay of Rs. 16.00 lakhs for the purchase of synthetic twine and electronic equipment.

Manpower, training and expertise:

24. Bonafide fishermen trained at the fishermen training centres will be selected and deputed for training in the Central Institute of Fisheries Operatives to qualify themselves as Master Fishermen, Engine Drivers, etc. The training facilities offered at the Central Institute of Fisheries Education, Bombay for training in Fisheries Administration and Technology will also be taken advantage of. About 1,000 fishermen will be additionally trained during the plan period.

25. Also the scheme of awarding scholarships to the fishermen students for post matriculate studies and professional course to fishermen is to be continued during the Fourth Plan. The programme is to give 500 scholarships for which a total outlay of Rs. 6.00 lakhs is provided in the Plan.

Housing, Colonisation and other Welfare Schemes:

26. The living conditions of the fishermen in general continue to be miserable and call for the continuance of the welfare schemes pursued in the previous plans. The same will be implemented through the fishermen Co-operatives in the Fourth Plan. The benefits of the housing, colonisation and other welfare schemes will be extended to the really weaker sections among the fishermen. An outlay of Rs. 50.00 lakhs is set apart for constructing 500 houses for the use of fishermen.

Co-operation:

27. The fourth Plan aims at bringing a significant portion of fish production under fishermen co-operatives which will also undertake large scale marketing of fish. The apex body, which has already been organised at the State level, will be the policy making, co-ordinating and financing agency for all fishermen co-operatives. Issue of mechanised boats, supply of fishing requisites, etc., will be routed through the co-operatives. During the plan period 135 producers' societies and 15 marketing societies will be newly organised.

Kerala Fisheries Corporation:

28. The management of the nine integrated projects envisaged in the Fourth Plan will be entrusted with the Kerala Fisheries Corporation. The prawns and quality fish caught in the trawlers as well as mechanised boats will be processed at each centre. The administration of the Kerala Fisheries Corporation will be suitably streamlined to fulfil this task.

FISHERIES

SCHEME-WISE DETAILS OF FOURTH PLAN

(Outlay Rs. lakhs)			
<i>Sl. No.</i>	<i>Name of scheme</i>	<i>State</i>	<i>Centre</i>
1.	Mechanised fishing	600.00	
2.	Trawler fishing	72.80	
3.	Boat-yards and Service Stations	3.00	
4.	Ice Plants and Cold Storages	40.00	
5.	Training Centres	35.00	
6.	Roads	100.00	
7.	Distribution of fish	36.00	
8.	(a) Fishing Harbours		610.00
	(b) Dredging and Stabilisation of the bar at Neendakara and Beypore		479.00
9.	(a) Inland (Reservoir) Fisheries	15.00	
	(b) Other fisheries	10.00	
10.	Fisheries Research (including Statistics)	10.00	
11.	Manpower, training and expertise	6.00	
12.	Supply of fishery requisites	16.00	
13.	Housing, Colonisation and Other Welfare Schemes	50.00	
14.	Co-operation	100.00	
15.	Kerala Fisheries Corporation (Outlay included in schemes covered by the Integrated Projects)		
16.	Administration Extension	5.00	
17.	Scheme for development of Fisheries under Agriculture Refinance Corporation	1.00	
18.	Sample Survey	0.20	
Total		1100.00	1089.00

1.9. WAREHOUSING AND MARKETING

Scientific storage and marketing facilities are essential for the agricultural producers and consumers. The important work envisaged by the Kerala State Warehousing Corporation during the Fourth Plan is the consolidation and expansion of the existing Warehouses. The share capital contribution in the Kerala State Warehousing Corporation is made by the Central Warehousing Corporation.

2. The agricultural marketing schemes relate to the training of marketing personnel, re-organisation of marketing service, establishment of regulated markets, grading of agricultural commodities and market extension.

SCHEME-WISE DETAILS OF OUTLAY IN THE FOURTH PLAN

<i>(Rs. in lakhs)</i>			
<i>Sl.No.</i>	<i>Schemes</i>	<i>State</i>	<i>Centre</i>
1.	Share Capital Contribution to the Kerala State Warehousing Corporation	5.00	..
2.	Grading of Agricultural Commodities	10.00	..
3.	Market Extension	5.00	..
4.	Training of Marketing Personnel	1.50	..
5.	Regulated Markets	1.00	..
6.	Improvement of Intelligence Unit	0.05	..
7.	Strengthening of Agricultural Marketing staff	0.45	..
Total		23.00	..

CO-OPERATION & COMMUNITY DEVELOPMENT

The main objective of the Fourth Plan in the field of co-operation will be the rebuilding and strengthening of the co-operative credit structure in the matter of resources, personnel and procedure. In the light of the tardy progress achieved hitherto, it would be preferable to pursue a policy of stabilisation rather than indiscriminate expansion. Efforts should be directed at the elimination of the inefficient units, which now act as a heavy drag on the existing rather slender resources. In addition, extension of the co-operative movement to certain crucial fields is envisaged during the Fourth Plan period. Of equal importance is the need to introduce a rural bias into the movement. At present the movement is heavily loaded in favour of the urban population, especially the town dwellers and the middlemen. These sections have been greatly benefited by the movement.

2. Although amelioration of the plight of the weaker sections of the community is one of the avowed objectives of planning, hardly anything substantial has been achieved on this front so far. During the Third Plan, 37 Labour Contract Societies, six Rickshaw Pullers Co-operatives, two Hand Cart Pullers Co-operatives and two Washer-men's Co-operatives started functioning. No doubt these are laudable ventures. But, these touch only the periphery of the problem and do not delve deep into the economic malaise afflicting the weaker sections of the society. This aspect deserves greater attention than before.

3. High priority has to be accorded to the creation of a viable co-operative structure. Societies which are dormant and which hold out no prospects of development will perforce have to be purged; alongside a programme of amalgamation of the weaker societies should be undertaken in order to tone up the operational efficiency of co-operatives. The mounting overdues position also gives rise to alarm, and steps will have to be taken to do away with this malady.

4. While the volume of credit and its coverage has gone up manifold, the incidence has been extremely uneven. The existing arrangements to link up credit with production and marketing are far from adequate and stand in need of drastic revision. Similar is the position with regard to the Reserve Bank of India's credit policy. The Reserve Bank, it is true, provides credit at the low rate of interest of 4% in areas of intensive agricultural development, but this goes up to the high rate of 9% when it reaches the ryot. This wide margin of 5% is apportioned at the three intermediary levels viz., the State Co-operative Bank, the District Bank and the Service Co-operative Societies. The necessity and usefulness of so many

intermediary stages is open to question. Even if all of them are deemed essential, the margin of interest appropriated at the higher levels is too high to be justified by their actual service charges. The quantum of credit so far made available through agricultural co-operatives is only 30 percent of the total credit required for agricultural operations in a year. Even this meagre credit flowing through co-operatives goes into the hands of bigger cultivators to a large extent. The poor cultivator is thus left at the mercy of the village money-lenders who collect exorbitant rate of interest on the loans they distribute. The latest proposals to persuade commercial banks in the country to extend credit to the farming community also is not going to help the poor cultivator. He has no proprietary rights and is therefore not likely to secure credit from commercial banks. Unless and until the commercial banks are made to organise crop loan system, the new proposal will be absolutely ineffective as far as the cultivating class is concerned.

System of Credit cards:

5. The weaker sections of the peasantry are barred from taking advantage of the co-operative credit facilities because of the complex and cumbersome nature of the formalities to be observed for obtaining credit. These formalities also cause undue delay in the actual disbursement of credit while adding to the servicing charges. If co-operative credit is to benefit the poor ryots who badly need it, the procedure for issuing credit has to be simplified. It is therefore proposed to introduce a new procedure by which each cultivator will be provided with a credit card indicating his credit needs, repaying capacity, receipt and repayment of credit by him etc. The cultivator will be able to get the credit permissible to him by simply producing the credit card to the co-operative society.

6. Institutional agencies like the Agricultural Refinance Corporation, the L.I.C., the Unit Trust of India and the Industrial Development Bank are now playing a somewhat subdued role in the economic development of the State. These agencies are now concentrating their activities in the relatively developed States of India. In the Fourth Plan a reorientation in their outlook towards the poorly placed States will help to correct to a considerable extent the existing regional imbalances.

2.1 CO-OPERATION

Co-operative Credit:

7. At the end of the Third Five Year Plan, the Co-operative Societies could cover only about 42% of the agricultural families in the State. The target for coverage of rural families by 1974 has been fixed at 80%. The membership of the primary societies is also expected to double i.e., from 13.65 lakhs in 1966-67 to 27 lakhs in 1973-74. The co-operatives will provide the small farmers with loans to the extent of Rs. 35.00 crores by 1973-74.

8. The Department of Co-operation is implementing a scheme for removing overlapping of area of operation of credit societies and dual membership. This involves amalgamation of small societies to form potentially viable units. Suitable assistance will be given to such societies. Agricultural credit societies issuing loans to the weaker sections of the community will be eligible for the receipt of an outright grant for the creation of a special bad debt reserve. This scheme which has been in force from 1962-63 is also being modified. Previously the rate of grant formed 4% of the loans issued in a particular year over that of the previous year. Now to make it more meaningful the grant is admissible only on the increase in loans issued over the previous year. The rate of grant has been enhanced to 12% of the increase in advance.

Central Banks:

9. Consequent on an increase in the activities of the Central Bank, by the opening of new branches, subsidies to meet the expenditure on one Branch Manager and Accountant each in the newly opened branches will be paid. All the important areas will be covered. At present 50 areas including branches at the headquarters of the Central Bank are covered. Branches are to be set up in the remaining 23 areas. Provision has been made to pay to the Central Banks outright grants for creating special bad debt reserves. Grants are to be paid at the rate of 4% of the increase in agricultural loan issued to the weaker sections of the community at the society level.

Primary Land Mortgage Bank:

10. The 19 Primary Land Mortgage Banks operating in the State will be assisted in meeting the expenditure on the land valuation officers on their staff. Provision is also made for Government subscription to the debentures of the Primary Land Mortgage Banks.

Relief and Guarantee Fund:

11. A relief and guarantee fund has been constituted at the State level which is intended for payment of grants to cooperative institutions for enabling them to write off irrecoverable arrears caused by wide-spread famine or natural calamities.

Co-operative Marketing:

12. The value of the produce handled by the primary marketing societies, in 1965-66 was Rs. 340 lakhs. In 1974 it is expected that Rs. 900 lakhs worth of produce will be sold through the primaries. This necessitates the provision of additional share capital contribution to existing societies on the basis of share capital collected from members. In addition, newly organised primary marketing societies will be given share capital contribution to the extent of Rs. 12.00 lakhs. To expand the current level of activity additional storage facilities are needed. Assistance is given to primary marketing societies for the construction of new Mandi level godowns each of 20 tonnes capacity at the rate of Rs. 35,000 (75% loan and 25% subsidy). Service societies will also be given financial assistance for the construction of storage godowns. Provision is also made for the construction of rural godowns.

13. To enable the marketing societies to undertake grading and standardization programmes prior to the marketing process, it is decided to pay subsidy to such units. Share capital contribution will be given to marketing societies setting up processing units. The processing units proposed are tapioca, fruit and vegetable processing and oil milling.

Apex Marketing Society:

14. The share capital of the apex marketing society will be suitably strengthened to enable it to play an effective role in inter-state and export marketing of agricultural produce.

Co-operative Training and Education:

15. The Fourth Plan visualised an expanded role for the co-operative sector, which necessarily calls for utilising the services of efficient and trained personnel for managing the societies. The peripatetic units engaged in non-official education number 21 (including 6 units in Palghat and Alleppey). These units organise camps of 24 days' duration for part-time secretaries and of 5 days' duration for office bearers and members of the Managing Committee. The activities of these training institutions will continue in the Fourth Plan. Alongside seminars and inter-State study tours by non-official cooperators and award of prizes to the best societies will be continued during the Fourth Plan.

Consumer Co-operation:

16. The present system of share capital contribution to wholesale stores additional assistance for construction of additional godown etc., according to requirements will be continued in the Fourth Plan. The assistance will be in the form of 75% loan and 25% subsidy. Wholesale stores will also be adequately assisted in setting up processing units and multi-room shops. The multi-room shop will enable the consumer to get all the requirements under one roof. Similarly financial assistance will be given to the State Federation of consumer stores.

17. Cultivators who have no lands of their own will be provided with cultivable lands under a scheme of cooperative colonisation. Eight colonies have so far been organised under the scheme in addition to 2 ex-servicemen cooperative colonies. Loans to colonists will be issued.

Purchase of special debentures and participation of N.C.D.C. schemes:

18. The Kerala State Cooperative Central Land Mortgage Bank proposes to float special development debentures to implement some of the schemes of the Agricultural Refinance Corporation. The debentures are subscribed to by the Reserve Bank of India and the State Government on the basis of prescribed percentages. The outlay proposed is for meeting the State's share in respect of the floatation of such debentures as well as for the schemes sponsored by the National Cooperative Development Corporation.

Co-operative Administration:

19. Provision is made for strengthening the audit and inspection wing of the Registrar of Cooperative Societies. This measure of reinforcement is planned in such a manner as to ensure freedom of operation for speedy implementation of plan schemes.

CO-OPERATION

Scheme-wise details of Fourth Plan outlay

(Rs in lakhs)

Sl. No.	Name of Scheme	State	Institutional	Centre
<i>I. Credit</i>				
1	Subsidy to Central Cooperative Banks for appointment of managerial and supervisory staff	0.50	..	..
2	Subsidy to Central Cooperative Banks for opening of branches	1.50	..	..
3	Agricultural credit relief and guarantee fund	5.00	..	..
4	Subsidy to Central Land Mortgage Bank for appointment of staff	0.10	..	..
5	Subsidy to Primary Land Mortgage Banks	0.50	..	..
6	Appointment of land valuation officers	1.50	..	..
7	Purchase of debentures of Central Land Mortgage Bank	50.00	..	..
<i>II. Marketing and storage</i>				
1	Share capital contribution to primary marketing societies	12.00	..	..
2	Share capital contribution to Apex marketing societies	1.00	..	..
3	Managerial subsidy to Marketing societies	1.50	..	..
4	Grading Units	0.50	..	..
5	Price Fluctuation Fund	2.00	..	..
6	Construction of godown by marketing societies	3.00	..	..
7	Rural godowns	20.00	..	..
<i>III. Processing</i>				
	Share capital contribution to processing societies	25.42	..	..

<i>Sl. No.</i>	<i>Name of scheme</i>	<i>State</i>	<i>Institutional</i>	<i>Centre</i>
<i>IV. Training and Education</i>				
1	Junior Cooperative Training centres	4.00	..	..
2	Non-official education	4.00	..	..
3	Seminars, study tours, award of prizes etc.	0.40	..	..
4	Buildings for regional training centres	1.50	..	..
	<i>V. Additional Departmental Staff.</i>	19.75		
<i>VI. Consumers' cooperatives</i>				
1	Wholesale cooperative stores	10.00	..	..
2	Primary stores/branches	3.00	..	..
3	Department stores/multi-room shops	10.00	..	..
4	State Federation of wholesale stores	1.50	..	..
<i>VII. Miscellaneous Schemes</i>				
1	Labour Contract societies	0.50	..	..
2	Rickshaw pullers societies/hand cart pullers societies	0.58	..	..
3	Cooperative Colonisation	20.25	..	..
	Total	200.00		

2.2 COMMUNITY DEVELOPMENT

The Community Development Programme was conceived as a concerted and coordinated action to bring about social and economic development in the rural areas. The primary objective of the programme has been effective extension, i.e., the dissemination of better knowledge and technique in agricultural production and allied activities, rearing of livestock, health and sanitation and other aspects of village life, side by side with a programme of area development for which a budget provision is made on a schematic pattern.

2. The Community Development Programme was first introduced in the State during 1952. The entire rural area was delimited into 144 Blocks on a phased programme. All the Blocks came into existence by 1-5-1964. Each Block was given financial assistance at the rate of Rs. 12 lakhs during the first five years (Stage I) and Rs. 5 lakhs during the next five years (Stage II). The assumption has been that within a period of 10 years, a self-reliant village community with a reasonable degree of prosperity would emerge from the villages.

3. At the end of the Fourth Plan period, there will be 39 Stage II Blocks and 105 post-Stage II Blocks in Kerala. The programme in this field being an all-India pattern, provision has been made in the State Plan under the schematic budget.

Panchayati Raj:

4. During the Fourth Plan period the Panchayati Raj institutions are expected to take over a number of developmental and executive functions. These bodies and the committees or councils formed under them will be involved in planning and implementation of various programmes in the field of agricultural production, distribution of irrigation, provision of social amenities, etc., through greater delegation of powers and responsibilities and devolution of financial resources commensurate with their new responsibilities.

5. With the enactment of the Panchayati Raj Bill, the District Council will be responsible for Plan implementation at the District level. Amounts provided under various heads of development will be placed at the disposal of the Council. Hence, no separate provision is made on this account in the Fourth Plan.

Rural Manpower:

6. At the all-India level, the Rural Manpower Programme does not seem to have generated the desired amount of employment assets and hence the Planning Commission is of the view that the scheme need not be pursued during the Fourth Plan period. But the

experience in Kerala has not been so very discouraging. In the 36 Blocks where the programme was implemented in the State, it actually provided opportunities for new employment both to the unemployed and under-employed. Also it has led to the creation of considerable amount of community assets. But the problem of rural unemployment and under-employment in the State is so severe that it virtually retards the progress of the State's rural development. Hence taking the seriousness of this situation into account, the continuance of the rural manpower programme in the State is a real necessity. In the Fourth Plan, the scheme will be extended to 96 Blocks. An outlay of Rs. 141 lakhs is provided for in the Plan. In addition to the expenditure on works, the proposed provision will include the requirements for imparting skills to rural youth in the age group 15 to 25 years to provide a task force for the new works.

Scheme-wise Details of Outlays in the Fourth Plan

(Rs. lakhs)

<i>Sl. No.</i>	<i>Scheme</i>	<i>State</i>
1.	Community Development (Stage I & II)	328.00
2.	Rural Manpower	141.00
Total:		469.00

2.3 PANCHAYATS


Considerable discussion has taken place on the need to make Panchayats the key developmental units. The main line of activity so far, has been the distribution of loans to the Panchayats for building up remunerative assets of public utility such as office buildings, staff quarters, slaughter houses, construction and improvements of markets, vehicle parks both motorized and non-motorized, construction of cattle pounds, etc. The delimitation of the entire State into Panchayats has been completed. Panchayat Raj legislation to be enacted shortly, will provide abundant opportunities for the panchayats to develop themselves into full fledged units of development.

2. In formulating local plans, it is essential to assess carefully the development prospects and the present performance of these organisations. It is necessary to analyse in detail the administrative wherewithal, the resources raising potential and the actual performance of panchayat organisations with a view to equipping them for shouldering their responsibilities.

3. A problem to which attention has to be paid while drawing up area development plans is that of working out policies of infra-structural development, measures of land improvement (the afforestation, soil conservation etc.) and provision of services in keeping with the incidence of under-utilisation of labour resources in a given area.

4. Greater role than before has to be assigned to the Panchayats in the task of uplifting the vulnerable sections of society. The present line of development is none too satisfactory and has to be drastically toned up. The Panchayats are to be the nucleus of the planning process. The structure has to be recast in such a way as to shoulder greater responsibilities.

5. A sum of Rs. 100 lakhs has been proposed for the schemes relating to the development of Panchayats. The various programmes enunciated deal with such aspects as construction of village roads, upgrading of approach roads opening of grounds for sports and games, construction of public comfort stations, establishment of burning and burial grounds, installation of street lights, improving the financial position of panchayats, loans for building up of remunerative community assets, training programme and publication of Panchayat Raj Journal.



Scheme-wise details of Fourth Five Year Plan Outlay

(Rs. in lakhs)

Sl. No.	Name of Scheme	State
1.	Loans to Panchayats	98.00
2.	Publication of Panchayat Raj Journal	2.00
Total:		100.00

3.1 IRRIGATION

Assured availability of water will help to raise substantially the production of food and commercial crops. Out of 20.22 lakh hectares which form the net area sown in the State, the net area irrigated by all sources would be about 3.47 lakh hectares. Future policy must, therefore, continue to lay emphasis on the expansion of area under irrigation, particularly under paddy, and to explore the possibility of expanding the cultivation of other crops. The present irrigation facilities are now confined chiefly to paddy.

2. During the Third Plan it was expected that with the outlay of Rs. 11.42 crores an additional area of 57,000 hectares would be covered by irrigation. In reality, only an area of 831.6 hectares was additionally added to the area under irrigation. Even the irrigation schemes initiated during the Second Plan could not be completed during the Third Plan. Similar was the fate of schemes put through in the Third Plan. Hence, the speedy execution of projects assumes great significance. Projects once taken up for implementation should be proceeded with and completed at the maximum speed in order to reduce the rise in overheads, eliminate idle investments and the delay in realisation of benefits.

3. The State is embarking on a bold programme for progressively reducing its food deficit with the goal of reaching near self-sufficiency in food. This goal has to be achieved mainly by the adoption of improved agricultural practices on the existing area under rice. The success of such a programme of intensive cultivation of rice will depend largely on the extension of irrigation facilities to all the paddy lands requiring irrigation. This will necessitate the taking up and speedy completion of a number of major irrigation projects in the Fourth Plan. The cost involved will be so large that the State Plan cannot accommodate all of them. Hence no new schemes are proposed in the Fourth Plan.

Approach in the Fourth Plan:

4. The main strategy of development proposed in the Fourth Plan is to complete, as speedily as possible, all projects which have already been taken up so that the gap between investment and accrual of benefits will be short. The specific aim during the Fourth Plan is to complete all the projects started during the earlier Plans. The following projects, viz., Neyyar II stage, Gayathri, Pothundy, Periyar Valley, Kuttiadi, Pamba, etc., come under this group. The first priority will be on the completion of the distribution system in those projects where the reservoir storage capacity has already been completed. Secondly the commissioning of the continuing schemes will be taken up.

5. For the fully commissioned schemes at Malampuzha, Cheera-kuzhy, Chalakudy Stage II, Neyyar I, Mangalam, Peechi, Walayar and Vazhani, certain improvements aimed at stabilising the ayacut already achieved, are proposed during the Fourth Plan.

6. Provision is also proposed to be made for undertaking investigation and research, so that a comprehensive idea about the major irrigation potential of the State may be obtained.

IRRIGATION

Scheme-wise details of Fourth Plan outlay

Rs. in lakhs

<i>Sl. No.</i>	<i>Name of Scheme</i>	<i>State</i>
A. CONTINUING SCHEMES		
I. Major Schemes		
1	Periyar Valley	102.00
2	Kallada	800.00
3	Pamba	630.00
4	Kuttiadi	305.00
II. Medium Schemes		
5	Chitturpuzha	732.00
6	Kanhirapuzha	
7	Pazhassi	
III. Completed Schemes		56.00
B. NEW SCHEMES		
C. INVESTIGATION & RESEARCH		
Investigation and Research		50.00
Total A+B+C		2675.00

3.2 FLOOD CONTROL

Kerala has certain peculiar problems in the field of flood control. The State is traversed by numerous rivers and streams and these flow in torrents overtopping the low lying banks and inundating extensive areas of highly fertile lands. The problem is most severe in the midlands and coastal reaches. The flood control works centre round protection of river banks from erosion, protection of public properties like roads, buildings, etc., and the quick disposal of flood waters. So far, the measures adopted to tackle the problem have been inadequate. The measures that could be adopted for successful flood control are the construction of flood banks along both sides of the rivers to confine the river to flow at all stages within the banks, construction of flood spill ways leading to the sea and widening and deepening of river where the existing cross sections are inadequate owing to silting or otherwise. The recommendations of the Flood Control Technical Advisory Committee to improve the Champakara-thodu, open the Irumbanam-Puthussery-Nadamel canal and the Keeranallur-Pooraparamba canal deserve speedy implementation.

2. In the wake of continued flood damages on account of the flash flood type rivers in the State, the Committee had investigated the ultimate requirements in flood protection needed and as a result had come to the conclusion that works costing Rs. 22.4 crores would have to be undertaken to find a satisfactory solution to the problem. The expenditure can be spread over a number of plans and the allotment of Rs. 1.53 crores provided in the Fourth Plan has to be considered modest.

3. A State Flood Control Board and a Technical Advisory Committee known as Flood Control Technical Advisory Committee has been constituted to scrutinise the flood control measures in the State. The various schemes will be individually scrutinised by the Board and the Committee and will be executed only after obtaining their approval.

Anti-Sea Erosion:

4. The entire coast length of 590 Kilometres is exposed to the fury of the waves. At certain places along the coast, the sea advances by about 100 to 150 feet during monsoon and recedes by 80 to 130 feet resulting in a loss of 15 to 30 feet of land every year. The sea erosion on the coast line poses the danger of extinction in the long run of this narrow strip of land and with it the national highways. The tidal overflow also destroys dwelling places, paddy fields and other cultivated lands. The sections of the population, that are hard hit by the ravages of the sea are the fisherfolk dwelling on the coasts, who are constantly deprived of

their homesteads. Research studies point out that the sole permanent method of preventing sea erosion is by constructing sea walls. To ensure complete protection of the affected places about 320 kilometres of sea will have to be put up. A peculiarity of sea erosion is that any area which appears to be apparently stable may be exposed to ravages of erosion at any time. In this background, beaches which do not require immediate protection, have to be safeguarded.

5. The monsoon during June-July 1968 was particularly severe and has thrown into bold relief the necessity for undertaking urgent protective measures in further vulnerable beaches of the Kerala coast. The anti-sea erosion schemes sought to be included would require a total outlay of Rs. 499.95 lakhs.

FLOOD CONTROL

Scheme-wise details of Fourth Plan outlay

(Rs. in lakhs)

<i>Sl. No.</i>	<i>Name of Scheme</i>	<i>State</i>	<i>Centre</i>	
FLOOD CONTROL				
1	Flood Control	153.00	..	..
2	Anti-sea Erosion	499.95	..	..
3	Co-ordination of Statistics	00.05	..	..
		<hr/> 653.00		

3.3 POWER

Assured supply of steady power at relatively low cost should be considered as an important measure for attracting industries to Kerala. The policy of power development in the Fourth Plan will therefore be to increase installed capacity of power generation to ensure adequate supply of firm power even during non-monsoon periods at prices which will induce industrial development and to remove the bottlenecks in power distribution. One of the objectives of the plan would be to interlink the various regional grids with a view to the formation of an all-India grid. The assessment of power requirements should be made on the basis of the requirements of the entire Southern region. The objective of power schemes in Kerala during the Fourth Plan period will, therefore, be to make use of the hydro-electric-power potential to the maximum possible extent and make available the power generated to different parts within State and also to other States in the Southern region at cheaper rates. The cost of production of Power in Kerala is lower than in other states in the Southern region. Tapping of the hydro-electric potential of the State to the maximum extent will therefore be advantageous to Kerala as well as to other states in the region.

2. Power generation in Kerala started with the installation of thermal generating sets in some of the important towns to meet local needs of lighting and small power. With the commissioning of the first hydro-electric station at Pallivasal, the State started its power development on a large scale.

3. Prior to the implementation of the Plan schemes the total installed generating capacity in the State was 28.5MW. During the First Plan period the extension of the Pallivasal Scheme was carried out, raising the capacity of the Station to 37.5 MW. Sengulam Scheme with an installed capacity of 48 MW was also completed during this period and by the end of the First Five Year Plan the total installed capacity was raised to 85.5 MW. The augmentation of generating capacity helped to step up the generation of power to 850 million KWH per annum in the final year of the Plan. Rural electrification also made commendable progress during the Plan period.

4. During the Second Five Year Plan period, the first and second stages of Peringalkuthu Project with an installed capacity of 32MW were completed. In the Neriamangalam Project two units of 15 MW each were also commissioned and thus the total generating capacity of the State grid rose from 85.5 MW to 147.5 MW. The generation of energy per annum increased from 350 million units in 1956 to 582 million units in 1961, recording an increase of 66% over the period. The number of consumers rose from 79,575 to 1,74,993 during the Second Plan period.

5. The Third Plan started with a shortage of 6 MW in firm power capacity. The Third unit of the 15 MW Neriamangalam Station was commissioned in May 1963, increasing the grid capacity to 162.5 MW. But this increase in generating capacity did not contribute to any increase in the firm power output as the storage position remained the same as at the beginning of the Third Plan. During Third Plan period two units of 15 MW each were commissioned at the Panniar Station. But this added only 4 MW to the firm power output of the grid during 1963-64. The peak demands met by the hydel stations during 1964-65 was 156 MW. To supplement power supply from hydel station during the summer months temporary power supply from Madras for 20 hours a day with a maximum demand of 25 MW was taken. This was in addition to the 13 MW of permanent supply availed of for distribution in Malabar. Thus the total peak load of the system reached 194 MW in 1964-65. The shortage in firm power was about 75 MW. at the close of the Third Plan period. The first unit of 50 MW capacity in the Sabarigiri Project was put into operation in April, 1966, and the first unit of 18 MW capacity at Sholayar was commissioned in May 1966. This relieved the power shortage to some extent.

6. The important achievement after the Third Plan period is the commissioning of six units of 50 MW. capacity each at Sabarigiri during the years 1966 and 1967 and the commissioning of the three units each of 18 MW capacity at Sholayar, thus raising the total installed capacity of the system to 546.5 MW. With the substantial increase in installed capacity, emphasis had to be laid on transmission and distribution works as well.

Fourth Five Year Plan:

7. The policy of power development in the Fourth Plan will be to increase installed capacity for power generation further in order to ensure adequate supply of firm power at prices which will induce industrial development and to remove the bottlenecks in power generation. The assessment of power requirement would be based on the needs of the entire Southern region, keeping in view the Centre's policy of developing power on regional basis. According to the estimates of the Electricity Board a minimum of Rs 96.00 crores is required for the execution of the programmes relating to the schemes included in the Fourth Plan. Only an amount of Rs 76.25 crores is provided for power development in the State sector leaving the balance amount to be raised by the Board.

State sector schemes:

Spill-over Projects:

1. *Sholayar Project.*—The installed capacity of the Scheme is 54 MW (three units each of 18 MW). One unit of this station was put into commercial operation in May, 1966, another unit in January

and the third in May 1968. The spill-over outlay of the project to the Fourth Plan will be just marginal and is intended for clearing the residual payments.

2. *Sabarigiri Project.*—The Project consists of two dams, one across Pamba river and the other across Kakki river, a tunnel interconnecting Pamba and Kakki reservoirs, a power tunnel taking off water from Kakki reservoir, penstock and power house with six generating sets of 50 MW each. Three units were commissioned in 1966-67 and remaining three in 1967-68. Certain augmentation works like installation of 220/110 KV substations for increasing the storage capacity of the dam and some other works have to be completed.

3. *Kuttiyadi Project.*—The installed capacity of the power station is 75 MW, comprising three units of 25 MW each. This is the first hydro-electric project to be taken up in the Malabar area. The construction of Civil works and the commissioning of all the three generator units in the power stations will be completed and it is expected that the project will be commissioned during 1970-71. Payments towards installation of electrical equipments and compensation for the transmission lines will be made during the Plan period.

4. *Idikki.*—This is the biggest Hydro-electric project taken up in the State and was the most important project included in the Third Plan. The Government of Canada are giving assistance by way of grant and loan for the project. It is assessed that an extra live storage of the order of 15 to 18 TMC. can be secured in the Idikki reservoir. The question of providing additional live storage capacity in Idikki reservoir was taken up with the Central Water and Power Commission and it has been decided to have live storage of 52.4 TMC. i.e., 18 TMC. of storage more than what was contemplated. It was also decided to locate this power house under ground, with three units of 130 MW capacity each initially, followed by three more units later. The first unit is hoped to be commissioned in 1972-73 while the other two units will be completed during 1973-74. The estimated cost of the project is Rs 68.20 crores.

Idamalayar Project.—This is a new scheme proposed to be taken up during the Fourth Plan period. The Project consists of the construction of a dam 84 metre high across Idamala, tributary of the Periyar and a power station with two units having an installed capacity of 25 MW each. The Scheme will help to augment the present dry weather flow in Periyar river necessary to sustain the industries located on the banks of Periyar.

5. *Transmission and distribution Schemes.*—The Fourth Plan envisages electrification of 400 new villages, and 300 new centres in already electrified villages, connecting up 3.5 lakh consumers, 15 lakh street lights, and 15,000 pumpsets. Emphasis is also laid

on construction of H.T. and L.T. distribution lines, conversion of single phase to three phase lines, strengthening of feeders and increasing distribution transformer capacity. As part of the Southern extra high tension zonal grid, it may be necessary to construct a 380 K.V. transmission line from the Idikki power Station to the Madras border. It is also proposed to inter-link the Kerala and Mysore grids through a 110 KV inter-state link between Kasargod and Mangalore.

Central Sector Schemes:

(i) Idikki Second Stage:

The Idikki Project envisages the creation of a reservoir of gross capacity 74,400 M. cft and the generation of 780 MW of power at 30% load factor. The firm power draft would be of the order of 1,440 cusecs. Firm power that can be generated from this power draft is 210 MW. at 100% load factor. The first stage of the project envisages installed capacity of 390 MW. in 3 units of 130 MW. each. Since the Idikki power station is designed to function as a peaking station with a load factor of 30%, it is desirable to take advance action for the completion of the second stage of the project also during the Fourth Plan period. The main items of work under the second stage are lining the second pressure shaft and installation of three generating units of 130 MW each and associated equipments.

(ii) Silent valley:

The Project contemplates construction of a concrete gravity dam 390 ft. high across Kunthipuzha river to impound 8890 M. cft of water with a firm power draft of 300 cusecs (8.5 cu.M. Secs.) over an average of gross head of 2,800 ft. (853.44 metres) firm power to the tune of 56,000 KW. at 100% load factor or 93,300 KW at 60% load factor will be generated. Secondary power to the extent of 6,700 KW at 100% load factor will also be generated under this scheme. The project dam and the spillway dam of the project will be located in the Kozhikode District while the power tunnels, penstock and power station will be located in the Palghat District.

(iii) New Pallivasal:

This Scheme envisages the construction of a substitute power station for the existing Pallivasal Power Station which is the oldest station in operation in the State. Three sets of machine of 20 MW of generating capacity are proposed to be installed at the station, one of them acting as a unit. The construction of the project can be completed within a period of 3½ years, without interruption of generation in the present Pallivasal Power House.

(iv) Lower Periyar Scheme:

This scheme is the last in the series of power stations in the Periyar basin. The station is designed to accommodate 4 machines of 60 MW capacity each. The project consists of (a) a diversion dam 73 ft. in height across Periyar with a gross impounding capacity of 257 M. cft., (b) a water conductor system consisting of power tunnel 25' dia and 43,321 ft. long and a system of penstocks and (c) a power station which accommodates 4 machines of 60 MW capacity each located on the left bank of Periyar river.

(v) Perinjankutty Project:

The Project consists of a main dam across Perinjankutty river 450 ft. high to create a gross storage of 30 TMC, a head race tunnel 12,830 ft. long, a surge shaft and low pressure pipe line, a system of penstocks comprising 5 nos. of 96" dia pipe 2,650 ft. long and a power station to house 5 units of 80 MW each. When completed, the project will feed 1,267 units of energy per annum and will add 400 MW of installed plant capacity to the grid. The project will yield 118 MW of power at 100% L.F. Only preliminary works are aimed at in the Fourth Plan Period.

Investigations:

The collection of hydrological data will be continued during the Fourth Plan period. Even for the schemes for which project reports are prepared, further confirmatory geological data will have to be collected. In case of Pooyankutty and a few other projects, additional reservoir survey, examination of better alternatives for greater utilisation of the available waters, etc., are necessary. The investigation of Karapara, Kuriarkutty, Pulikalai, diversion of Perinjankutty and Idikki, involving numerous diversion weirs and tunnels, and a few intermediate power-houses, etc., will be conducted during the Plan period.

POWER

Scheme wise details of Fourth Plan Outlay

(Rs in lakhs)			
Sl. No.	Spill-over Project	State Sector	Central Sector
1	Sholayar	7625.00	..
2	Sabarigiri		
3	Kuttiadi		
4	Idikki		
5	Transmission		
6	Distribution and Rural Electrification		
7	Investigation of Hydro Electric Projects		
8	Improvement works in existing generating Stations		
New Schemes			
1	Edamalayar	..	..
2	Pandiar-Punnappuzha	..	..
3	Kakkad Scheme	..	..
4	Idikki Second Stage	..	1200.00
5	Silent Valley	..	1600.00
6	New Pallivasal	..	360.00
7	Lower Periyar scheme	..	2000.00
8	Perinjankutty scheme	..	300.00
9	Thermal Plant	..	900.00
		7625.00	6360.00

Note :—A total outlay of Rs. 9,600 lakhs will be needed for the schemes included in the State sector. Of this the State will provide Rs. 7,625 lakhs and the remainder will be met from the finances of the Electricity Board and institutional finance. The outlay of Rs. 9,600 lakhs will be distributed as follows: Sholayar (Rs. 10 lakhs), Sabarigiri (Rs. 105 lakhs) Idikki First stage (Rs. 4,200 lakhs), Kuttiyadi (Rs. 175 lakhs), Edamalayar (Rs. 480 lakhs) Investigation (Rs. 80 lakhs), generation and transmission (Rs. 1,250 lakhs), Distribution and Rural Electrification (Rs. 3,200 lakhs) and Centrally sponsored schemes—inter-State lines (Rs. 100 lakhs).

4. INDUSTRY AND MINING

Kerala's Fourth Five Year Plan envisages a deliberate programme of industrialisation through the establishment of a number of modern units in the Central, State and Private sectors and to stabilise the traditional industries of the State such as Coir, Cashew, Handloom and Beedi which provide substantial employment. The Industrial Policy Statement of the Kerala Government (1967) is an indicator of the line on which the State wishes to encourage industrial growth. A number of concessions are offered to the entrepreneurs who intend to invest in Kerala. Power-intensive industries and other industries started outside the existing major industrial belts would qualify for suitable rebates in power tariffs. The Industries Department, the Small Industries Corporation and other agencies engaged in the promotion of small scale industries will provide the information necessary to entrepreneurs for starting small scale units in the State. In the case of large industries the State will assist in obtaining licence and in procurement of raw materials besides meeting part of the cost of project studies. The land acquisition cost will be recovered from the industries in easy instalments. The Government proposes to provide guarantee to enable private industrialists obtain credit from Central or State agencies of institutional credit. The selection and location of large scale units will be made after due consideration of the resources in each District and the need for reducing regional imbalances as between the Districts and Taluks in the State.

4.1 LARGE AND MEDIUM INDUSTRIES

Kerala is quite backward compared to several other States in the Indian Union in the matter of large industries. This situation calls for a change in the licensing policy of the Government of India. The licensing policy should be utilised as a lever for the uplift of backward areas by making it conditional that new licences would be granted to new units in the backward regions like Kerala, subject to techno-economic feasibility of the projects.

2. During the First and Second Plan periods no appreciable progress could be achieved in the field of large and medium industries. In the First Plan the outlay in this sector was only of the order of Rs. 0.25 crore. During the Second plan the outlay was Rs. 1.02 crores as against the total outlay of Rs. 87 crores for the State Plan. In the Third Plan a slightly large effort was made and an expenditure of Rs. 7.60 crores was incurred on large and medium industries. The major schemes taken up during the Third Plan period were the

modernisation and reorganisation of the Government industrial concerns and the setting up of few Development Areas and the Kerala State Industrial Development Corporation. Consequent on the additional investments made in the Government commercial concerns, these units were reorganised as joint stock companies to ensure better working.

3. The Central sector has a major role to play in the industrial development of Kerala, especially in view of the fact that investment capacity of the State and private sector is severely limited. The Central investment in industries in Kerala has been scanty in the First and Second Plan periods. The Centre appeared to have approved schemes worth Rs. 71 crores in the Third Plan but the actual investment in the plan period has only been of the order of Rs. 49 crores. Though balanced regional development has been recognised in the last three Five Year plans it has never been given the necessary emphasis. Rich regions like Maharashtra and West Bengal have been grown richer during the plan periods leaving the backward States like Kerala still backward. To remove this anomaly of unbalanced regional development, the Central investment in the Fourth Plan should be of a substantial order in Kerala.

4. In the Private Sector fair progress was achieved during the Third Plan and the subsequent annual plan periods. A number of new private factories sprang up in the Cochin-Alwaye-Ankamali industrial belt. It is hoped that with the assistance of the Centre in the matter of licensing policy and the financing institutions like I.F.C., L.I.C. and I.C.I.C.I. a number of private industries will be started during the Fourth Plan period.

5. The Government-owned and Government majority industrial concerns will be further expanded during the Fourth Plan period. A total outlay of Rs. 12 crores is suggested for the different schemes under the State sector. This outlay includes Rs. 5 crores to be made available to the Kerala State Industrial Development Corporation for the promotion of industries in the private sector, Rs. 1 crore for Development Areas in the State and another one crore for the schemes under the Plantation Corporation of Kerala.

FOURTH FIVE YEAR PLAN

Sl. No.	Scheme	Financial outlay (Rs. lakhs)	Physical target
(1)	(2)	(3)	(4)
I. Large and Medium Industries :			
(a) <i>Fully owned Government Companies :</i>			
1	Trivandrum Rubber Works Ltd.—Enhancement of Capacity	21.00	{ 7.5 lakh cycle tyres 7.2 lakh cycle tubes 3 lakh cycle rims
2	The Kerala Ceramics Ltd. (i) Balancing the manufacturing capacity in the Porcelain Factory and Modernisation & Expansion of China clay mines, (ii) Manufacture of Ceramic transfers	99.50	{ 1200 tonnes porcelain crockery 3.6 lakh ceramic transfer sheet 24000 tonnes china clay
3	Travancore Plywood Industries; Establishment of a modern Plywood Factory	6.00	{ 20 lakh Sq. m. Commercial Plywood 1.25 lakh Sq. m. flush doors
4	Kerala Soaps and Oils Ltd. (i) Enhancement of capacity for the production of soap and Installation of a Mazzoni Plant (ii) Hydrogenation of Fish Oil	54.50	{ 1400 tonnes soap products 3000 tonnes hydrogenated fish oil
5	Kerala Electrical & Allied Engineering Co. Ltd., Electrical equipment manufacturing Unit (Distribution, transformers, H. R. C. fuses etc.)	23.00	

(1)	(2)	(3)	(4)
6	Development Areas	100.00	
7	Kerala State Industrial Development Corporation Ltd.	500.00	
8	Trivandrum Spinning Mills Ltd., Establishment of a weaving Section	3.00	70 lakh yards of cloth
	Sub-total	807.00	
(b) Government Majority Companies/Co-operative Societies:			
9	United Electrical Industries Ltd., Scheme for expansion & diversification of activities	25.00	{ 3700 single disc. poly ph. meters 5000 automatic startdelta starters 6000 & LT and HT switch gears 30000 static capacitors 24000 tonnes of Tio 2 11400 spindles
10	Travancore Titanium Products Ltd., Expansion of capacity for the production of titanium dioxide	140.00	
11	Cannanore Co-operative Spinning Mills Ltd., Expansion of Spindleage	15.00	
	Sub-total	180.00	
(c) Other Schemes			
12	Cashew Development Corporation	20.00	{ 1200 tonnes of fire bricks 3600 tonnes of flooring tiles
13	Chalakudy Potteries	5.00	

(1)	(2)	(3)	(4)
14	Travancore-Cochin Chemicals Ltd., Enhancement of capacity	10.00	
15	Tracco Cable Co. Ltd., scheme for diversification of production	20.00	1000 Km of telephone cables
16	Kerala Commercial Corporation	6.00	
17	Transformers & Electricals Kerala Ltd., Scheme for the manufacture of switch gear & expansion of capacity for manufacture of power transformers	27.25	
18	Distillery Project	20.00	2 units of 6000 gallons each of alcohol
19	Plantation Corporation	100.00	405 hectares of rubber
20	Encouragement of the Film Industry	4.75	
	Sub-total	213.00	
	Grand Total (Large & Medium Industries)	1200.00	

CENTRAL SECTOR*

<i>Name of Industry/Scheme</i>		<i>Investment (Rs. in lakhs)</i>
1	Precision Instruments	750.00
2	Ship building yard	1500.00
3	Contraceptives	50.00
4	Cochin Fertilisers	4500.00
5	Hindustan Insecticides (expansion)	76.00
6	Travancore Titanium Products (expansion)	250.00
7	FACT Fabrication shop for pressure vessels	500.00
8	Hindustan Machine Tools	500.00
9	Cochin Refineries	1000.00
10	Electro Thermal Phosphorus Plant—FACT	2700.00
11	India Rare Earths	
	(a) Ilmenite, Zircon	147.00
	(b) Rare earth chloride, trisodium phosphate, thorium hydroxide	114.76
12	Petro-chemical Industries	15916.45
13	Bovine project (Leather and other products)	300.00
14	Manufacture of zirconium fits compounds	150.00
15	One unit of Hindustan Aeronautics	1500.00
16	Other projects for which there is scope	2500.00
Total		32,454.21

* The investment suggested in the Central Sector is the same as that shown in the Draft Plan.

4.2 MINERAL DEVELOPMENT

The State is backward in mineral out-put compared to States like Bihar, West Bengal, Madhya Pradesh and Maharashtra. Though no extensive study of the mineral resources of the State has been made till now, certain limited surveys for limestone in Palghat District, China clay in the Trivandrum, Quilon and Ernakulam Districts, graphite in Trivandrum District and iron ore in the Kozhikode District were undertaken during the Third Plan period. It is estimated that about 4 million tons of Kankar limestone will be available in Palghat District. Crystalline limestone of the order of 7 lakh tonnes has also been discovered in the Palghat District. A deposit of 7 million tonnes of graphite has been located in Trivandrum District. About 17 million tonnes of China clay is found to be available in the three Districts of Trivandrum, Quilon and Ernakulam. Nearly 15 million tonnes of iron ore has been found in the limited area surveyed in the Kozhikode District. The total expenditure under mineral development during the Third Five Year Plan period was Rs. 2.76 lakhs. An amount of Rs. 5 lakhs is provided for the schemes under mineral development during the Fourth Plan. Of this Rs. 3.25 lakhs will be spent on detailed investigation for economic minerals on a taluk-wise basis and the remaining Rs. 1.75 lakhs for the construction of a building to house the Departmental Office, laboratories and library. Detailed investigations are proposed to be conducted in 31 taluks in the State. The building site is expected to be obtained in 1970-71.

MINERAL DEVELOPMENT

<i>Sl. No.</i>	<i>Name of Scheme</i>	<i>Outlay (Rs. in lakhs)</i>
1	Detailed investigation for economic minerals on a taluk-wise basis	3.25
2	Construction of building to house the Departmental Office, Laboratories, Library etc.	1.75
Total		5.00

4.3 EXPORTS AND IMPORTS

Kerala which has a prominent place in the export map of India, has a crucial role to play in promoting the exports of India. The State should attempt at augmenting her traditional exports like tea, cashew, pepper, coir and coir products, and fish and fish products etc. Kerala's contribution to the exports of India forms about 12% of the Indian exports. The rate of growth of Kerala's exports has been higher than the rate of growth of India's exports. This indicates that Kerala can, if properly planned, do better in this field. Besides taking measures for improving the production of export-oriented agricultural commodities, possibilities of exporting iron ore and other non-traditional commodities will also be explored during the Fourth Plan period. It is proposed to establish a 'Commercial Corporation' exclusively meant for carrying out export activities of important commodities which have at present no organised and well managed foreign markets. The Commercial Corporation may have separate wings for these traditional commodities for the promotional activities relating to these commodities. The Kerala Commercial Corporation will be a public sector undertaking and will engage itself in the direct export of different commercial crops of the State. It will also undertake to import basic raw materials required for feeding the State's industries. The Corporation with its different wings for different groups of commodities is expected to help to promote the interest of co-operative, public and private sector undertakings by marketing their products. Steps for registration of the proposed commercial corporation for export import trade, under the Companies Act 1956 and acquisition of required land to house the same are being taken. In the State Plan a token provision of Rs. one lakh is made for the working of the Corporation.

4.4 VILLAGE AND SMALL INDUSTRIES TRADITIONAL INDUSTRIES

In the strategy for Industrial development of Kerala a significant place will be assigned to the re-organisation of traditional industries. The majority of the industrial work force in Kerala is engaged in traditional and low wage industries. The average industrial worker in the State gets the lowest wage compared to his counterpart in other States of the Indian Union. The policy for traditional industries in the Fourth Plan is to develop these industries on healthy lines so as to make them self-reliant. Therefore it is proposed to make a thorough investigation into the organisational aspects of traditional industries like coir, handlooms and cashew during the Fourth Plan period.

Handlooms:

2. There are about 1 lakh looms in the State. Of this only 50% are in the Co-operative sector. The expansion of the Co-operative sector will be further encouraged during the plan period. The major difficulty faced by the small scale handloom sector is the paucity of working capital. To aid this sector a Handloom Finance Corporation with an authorised capital of Rs 1 crore has been established. This Corporation will be further strengthened during the Fourth Plan period. The plan also aims at strengthening the Handloom Apex Society, expansion of existing industrial Co-operatives, establishment of handloom houses in important towns, expansion of existing dye houses and setting up of new dye houses and supply of improved appliances. Introduction of power looms in a substantial way is also proposed in the plan. This will be in line with the programme of conversion of handlooms into powerlooms envisaged in the earlier plans.

3. The organisation of the handloom industry on Co-operative lines has been the main feature of the development programmes up till now. To rehabilitate the loomless weavers, Industrial Co-operative Societies, workshop societies and production-cum-sales societies were formed. A consolidation of the performance of the existing societies as also bringing in more looms which are now lying idle and scattered under the Industrial Co-operatives will be undertaken in the Fourth Plan period. The improvements to be effected under the Fourth Plan relate to stepping up of production in the handloom sector, better wages, toning up of the marketing practices, efficient distribution of raw material, qualitative improvement of production, export promotion and welfare measures for the amelioration of handloom weavers. Most of the schemes proposed relate to those which were already initiated in the earlier Plan

periods and are to be intensified greatly during the Fourth Plan period. The new schemes include the Handloom Finance Corporation, Common Facility Centre and Export Oriented Production Centre, introduction of semi-automatic looms and warehouses.

Coir Industry:

4 Coir provides employment to a very large section of the coastal population and contributes considerably towards national wealth in the form of much needed foreign exchange and revenue. Roughly about 6 lakhs of workers are employed in the industry and about 10 lakhs of people depend on it for their livelihood. Coir and coir products bring in foreign exchange worth about Rs. 15 crores to India. There are at present 543 Co-operatives in which the State Government has made an investment of about Rs. 278 lakhs by way of share capital and working capital loan. These co-operatives have imparted some beneficial impact on the industry. The Coir Development Scheme conceived by the Government of Travancore-Cochin was brought under the First Five Year Plan and thereafter it found a place in the subsequent Plan schemes. The Fourth Plan envisages the continuance of the schemes included in the previous plans and the extension of the coir co-operative sector. An outlay of Rs 300 lakhs has been provided for this purpose. The need of the hour is to take dynamic steps to revitalise the industry and to improve the conditions of coir workers. The industry at present uses very poor technology. A gradual but planned introduction of higher technology is necessary in the long term interests of the industry. The considerable amount of foreign exchange yielded by the industry brings to fore the necessity for forming an Export House to handle export business in coir. Marketing and export problems of coir will get due consideration in the Fourth Plan period. The major portion of the outlay proposed for coir development will be for the revitalisation of the existing primary societies and for the organisation of pilot projects. Under the former scheme it is proposed to raise the grant of working capital of the societies to 25 times the paid up share capital as against the present practice of granting ten times the paid up capital. Besides ensuring the financial stability of the primary societies the scheme also proposes to make the societies responsible for the purchase and retting of husk, distribution of retted husk to members and purchase of yarn produced by the members. The scheme for the setting up of pilot project areas calls for making concerted efforts to organise co-operative societies in areas where different varieties of yarn are produced and which have earned a reputation in the local and foreign markets. There are eleven principal varieties of coir yarn which are linked to a particular area due to specific climatic and manufacturing conditions. The Fourth Plan envisages the formation of 600 Coir Co-operatives (including revitalised ones).

Handicrafts:

5. The Fourth Plan schemes under handicrafts are drawn up with a view to providing gainful employment to artisans and earning increased foreign exchange. The objectives of the Fourth Plan are (i) preservation of skills (ii) orderly organisation of production and improvement of quality (iii) export expansion and inter-state marketing (iv) raising worker productivity and wages and improving workers' conditions and (v) expansion of employment opportunities especially among the artisan class. In drawing up the details of the Fourth Plan, consideration is given to the limitations of the past and the need at present. The Plan also envisages the provision of financial assistance to the Kerala State Handicrafts Development Corporation. The Plan outlay under this item is Rs 51 lakhs.

Cashew:

6. Of the different commodities exported from Kerala, cashew kernels and cashew shell liquid together bring in about Rs 60 crores worth of foreign exchange. Cashew easily tops the list of export products of Kerala and is the second biggest dollar earner for the country. Of the 2.6 lakhs tonnes of raw nuts required for cashew industry only about 60,000 tons of nuts are locally produced, the balance being imported from East African countries. Raw material scarcity is the imminent danger facing the industry as many of the East African countries have set up their own processing units. Competition is expected to come from within India as well. States like Maharashtra, Mysore and Madras have also set up processing factories.

7. The Government of India do not seem to be quite alive to the problems confronting the industry. Otherwise the centre would not have included cashew in the O.G.L. list. The Government of India should be requested to take steps to see that only actual users are enabled to purchase raw nuts.

8. Re-organisation of the cashew industry requires immediate attention. About one lakh workers are dependent on this industry. Closing down of the organised industrial units in this sector is taking place in an alarming way thereby causing added hardship to the workers who are already the lowest paid among factory workers. To prevent this and to stabilise the industry the Government has recently set up a Cashew Development Corporation.

9. Beedi and cigar industries also come under traditional industries and require attention from Government. The Beedi and cigar industry faces keen competition from Madras and Mysore. Adequate steps will be taken during the plan period to protect this industry.

SMALL SCALE INDUSTRIES

10. Small Scale Industries can make a significant contribution towards expanded employment and increased production. The Industrial policy Resolution announced by the State Government and the intensive campaign launched for the promotion of small industries have given considerable impetus to the small industry development programme in the State. The Fourth Plan intends to take adequate steps to maintain this tempo by providing all possible facilities for the growth of small industries.

11. During the Second Plan period various measures were initiated with a view to making available the necessary technical advice, credit and other facilities to small industries. The emphasis in the Third Plan was on improving technical and organisational efficiency so that these industries might become self-supporting. The main emphasis in the Third Plan was laid on the setting up of common facility service centres which could cater to the requirements of small units. As a result of the development activities during the Third Plan the number of small units registered in the State rose to 3000 employing about 30,000 persons. One ceramic centre, one wood workshop, one service workshop one die casting unit, and one instrument factory started during the plan period were transferred to the Kerala Small Industries Corporation. The Industrial Testing and Research Laboratory was expanded and shifted to new premises. In the centrally sponsored sector two Rural Industries Projects one at Alleppey and the other at Kozhikode were started. These projects have earned a reputation as two of the best run rural industries projects in India. The scheme has proved to be extremely popular among small scale entrepreneurs.

Industrial Estates:

12. Government assistance especially in the matter of procurement of raw materials, land, construction of factory and office buildings, procurement of raw materials, machinery etc., and the introduction of modern technology are necessary for effective development of small scale industries. A prospective industrialist it is often tempted to start his venture in congested urban areas where facilities for industrial development are already available. This defeats the very objective of decentralisation of industries and creation of additional employment opportunities in the rural and semi-urban areas. Another problem confronting the small industrialists is lack of adequate finance for initial investment. The scheme of industrial estates was conceived with a view to solve the above problems by providing facilities such as water, electricity, transport, banks, post office, railway sidings, watch and ward etc., that are available in urban industrial localities in places away from urban areas. Besides

creating the necessary atmosphere for the advancement of small scale industries the industrial estates bring a number of different industrial units together and thereby facilitate the establishment of common servicing centres, introduction of modern techniques, collective purchase of raw materials and sale of finished goods.

13. There are altogether 18 industrial estates in the State. These come under two series, considering their period of starting. Eight of them namely, Pappanamcode, Kollakadavu, Ettumanoor, Paluruthy, Ollur, Olavakot, West Hill and Palayad come under the first series and were started during the second plan period and the early years of Third Plan period. Those coming under the second series were started during recent years. They are Karakulam, Umayanalloor, Kallettinkara, Karakkad, Manjeri, Karunagappally, Shertalai, Changanacherry, Vazhakkulam and Kasaragod. The total number of sheds in these 18 centres is 515, of which 289 are in the estates coming under the first series.

14. It is proposed to provide additional facilities in the existing industrial estates during the Fourth Plan period.

15. Functional industrial estates will also be given priority during the Fourth Plan period. Proposals are already in hand to have functional industrial estates for marine products, electronics, glass, leather and footwear, matches etc. It is proposed to establish some functional industrial estates in the State during the Fourth Plan period. The Life Insurance Corporation of India has evolved a scheme to finance assisted industrial estates set up in the private sector up to 60% of the total cost of project or Rs. 15 lakhs whichever is lower. During the Fourth Plan period attempts will be made to enhance the availability of finance for small scale units from the banking system and the financial institutions and the Life Insurance Corporation.

16. During the Third Plan period action was initiated for the establishment of development plots for industries. The scheme aims at assigning development plots to entrepreneurs in selected areas where accommodation facilities are otherwise difficult. According to this scheme land will be acquired and developed by providing general amenities like roads, water, power-supply etc. The land will be assigned either on outright purchase or hire purchase.

17. The problem of educated unemployment has assumed very serious proportions. The Central Small Industries Corporation has chalked out a Rs. 15 crore scheme to help the unemployed engineers to start small industries. This scheme is expected to benefit about 3000 engineers during the Fourth Plan period. Since unemployment among engineers in Kerala is more acute, it is proposed to evolve a special scheme to help technically qualified personnel to start small scale industrial ventures with assistance from the State Government.

18. The Fourth Plan period will see the establishment of small industries production centres in non-municipal areas. This scheme will create employment opportunities and enable expansion of the market for industrial goods in the rural areas of the State. The units will be installed by the Department and private entrepreneurs will be invited to participate in equity capital, substantial proportion of total share capital being retained by the Government.

19. Other important schemes proposed under small industry Programme are expansion of the Ceramic Service Centre of Mangattuparamba, a common facility centre for rubber and plastics and re-organisation of the Industrial Testing and Research Laboratory.

20. The work concerning the development and better utilization of subsidiary foods and other food raw materials involve scientific research and planning, enrichment and fortification programme for improving the quality of food supplied and application of technology and science for the preparation of various nutritional foods from indigenous raw materials which are not adequately exploited at present. Therefore a minimum programme to start industrial production of the already developed subsidiary foods and to explore the possibility of starting new units based on indigenously available raw materials is envisaged in the Fourth Plan.

VILLAGE AND SMALL SCALE INDUSTRIES

<i>Sl. No.</i>	<i>Scheme</i>	<i>Outlay (Rs. in lakhs)</i>
(1)	(2)	(3)
Traditional Industries:		
<i>(a) Handloom and Powerloom</i>		
1	Expansion and Strengthening of Existing Industrial Co-operatives (18 Societies)	24.00
2	Raising share capital and issuing share capital loans (8 Societies)	2.00
3	Providing services of Departmental officers to weavers' Co-operatives (21 Officers)	2.50
4	Conversion of pitlooms into frame looms (270 looms)	0.45
5	Supply of improved appliances	5.00
6	Expansion of existing dye-houses (40 existing ones) and establishment of new dye-houses (12 new ones)	6.00
7	Training of Weavers (60 weavers)	0.65
8	Marketing Depots (10 Depots)	2.00

1)	(2)	(3)
9	Handloom houses (7 Nos.)	6.50
10	Rebate on sale of Handloom cloth	60.00
11	Publicity and Propaganda	2.50
12	Collection of Statistics	0.25
13	Quality Control	0.70
14	Subsidy to Co-operative Banks against loss of interest and other losses	6.00
15	Pilot centre for intensive experimentation of R. B. I. Credit	0.50
16	Grant to Kerala State Handloom Weavers Co-operative Society	0.40
17	Grant to Kerala State Apex Society and Participation in share capital of Apex Society	5.00
18	Training of Departmental Officers	0.50
19	Strengthening of Weavers Co-operative (52 Co-operatives)	8.00
20	Subsidy to Co-operative Banks for appointment of Bank Inspectors	2.30
21	Grant to Weavers' Co-operative to wipe off accumulated loss	3.00
22	Conversion of handlooms into powerlooms	50.00
<i>New Schemes :</i>		
23	Kerala State Handloom Finance Corporation (participation in share capital)	12.25
24	Handloom common facility centre and designs and export oriented production	3.00
25	Training of Employees of Weavers' Co-operative Societies	0.50
26	Introduction of Semi-automatic looms (250 looms)	2.00
27	Warehouses (8 Nos.)	1.50
28	Providing mobile van and three wheeler trucks (4 Nos.)	2.00
29	Collective Weaving Centres (2 Nos.)	2.50
30	Government participation in the share capital of Primary and Weavers' Co-operative Societies	3.00
Total (Handloom & Powerloom)		215.00

(1)	(2)	(3)
<i>(b) Coir Development:</i>		
1	Model Coir factory at Beypore	5.00
2	Loans to Coir Societies	75.00
3	Grants to Coir Societies	40.00
4	Coir Corporation—Pilot Projects (10 projects)	100.00
5	Development of Coir industry	4.00
6	Export House for Coir	50.00
7	Assistance for godowns	10.00
8	Managerial grant	13.00
9	Wiping of loss	2.00
10	Publicity and exhibition	1.00
Total (Coir)		300.00
<i>(c) Re-organisation of Beedi Industry</i>		16.00
<i>(d) Handicrafts:</i>		
1	Financial aid to co-operatives, marketing emporia, assistance to artisans	} (100 Societies) 10.00
2	Financial aid to craftsmen (600 persons)	
	Co-operatives and common facility centre	
3	Propaganda, Publicity, supply of free sample gifts	3.00
4	Quality marking (5 units)	3.50
5	Central Handicrafts Developments Research & Design Centre	5.00
6	Improved working space for craftsmen	4.00
7	Regional craft museums (2 units)	3.50
8	Old age pension to craftsmen (1200 persons)	2.00
9	Training in quality control	1.00
10	Mechanisation & introduction of Modern tools etc.	3.50
11	Administration	1.00
12	Association	1.50
13	Assistance to Kerala State Handicrafts Development Corporation	10.00
Total (Handicrafts)		51.00

(1)	(2)	(3)
<i>Small Scale Industries :</i>		
1	Development of ceramic service centre into a Production Centre	1.60
2	Strengthening of Industries Directorate	0.40
3	Mobile Workshops (2 Nos.)	2.30
4	Rural Workshops (10 Nos.)	0.20
5	Training of Supervisory & Managerial personnel	0.50
6	Exhibitions and Industries fairs	4.50
7	Small Scale Industries Directory	0.25
8	Quality marking (7 units)	6.50
9	Managerial and Technical assistance to Co-operative Societies	3.90
10	Kerala State Small Industries Corporation	9.50
11	Industrial Testing and Research Laboratory	12.00
12	Pilot Project, Neyyattinkara	5.00
13	Block loans	150.00
14	Warping and Sizing unit	5.00
15	Advance training to artisans including cluster type centre	2.00
16	Footwear Training Centre	0.10
17	Hire purchase scheme of the KSSI Corporation	1.50
18	Glass Utility articles centre	3.60
19	Subsidy on rent	0.40
20	Tool Rooms	10.00
21	Small Industry Production Centres (90 units)	38.00
22	Common facility service centre, Changanacherry	17.50
23	Foundry Service Centre	4.50
24	Aid to Small Industries Association and marketing assistance to Small Industries	0.60
25	Scheme for unemployed Engineers	20.00
26	Sales Emporia	0.15
Total (Small Scale Industries)		300.00

(1)	(2)	(3)
<i>Industrial Estates:</i>		
1	Providing additional facilities to industrial estates	22.00
2	Subsidy on rent on industrial estates	2.50
3	Functional type of Industrial Estates (Leather, Electronics and Ceramics)	12.50
4	Development plots in cities (Kozhikode, Thrikkakara, Quilon and Vaikom)	55.00
5	Assisted Industrial estate (Aroor Industrial estate)	3.00
6	Common facility service Centres in Functional and Assisted Industrial Estates (4 units)	5.00
Total (Industrial Estates)		100.00
<i>Food Processing Industries:</i>		25.00
Grand Total (Village and Small Scale Industries)		1007.00

5 TRANSPORT & COMMUNICATIONS

The crucial significance of a well-developed and co-ordinated transport and communications system for the rapid industrialisation of Kerala cannot be over-emphasised. Transport and communications facilities have to be developed in advance foreseeing the likely future requirements of development in other sectors. Priority has been given in the Fourth Plan for the speedy completion of spill-over schemes so that the benefits of investment already made will start accruing without delay. Due importance has been given for providing the missing links and bridges and for strengthening of important roads and bridges. While taking up the construction of new roads, the need of fisheries, forests, industries and tourism will be given adequate consideration.

2 The entire bus transport is proposed to be brought under State sector in stages, for which the Kerala Road Transport Corporation has already prepared a detailed scheme of nationalisation. Due consideration will also be given for the consolidation of the existing services and provision of more amenities to the travelling public.

3 The construction and development of ports and harbours will also get its due place in the Fourth Plan. Provision for improved landing and loading facilities at the minor ports of Badagara, Azhikkal, Neendakara and Beypore has been given importance in this programme. The possibility of developing Neendakara into a medium port is being investigated.

4. In Kerala with its extensive length of backwaters and numerous rivers, inland water transport forms an integral part of the overall transportation system. A number of programmes for construction of new canals and effecting improvements in the existing canal ways are to be taken up in the Fourth Plan.

5. The place of railways in the overall transportation system of Kerala is at present very limited. But railways should ultimately play a key role particularly in goods transport. There is only a metre gauge line now linking Ernakulam with the areas in the south. Cochin being the terminal harbour, there is always heavy traffic to and from Cochin. Construction of new broad gauge line from Cochin to Trivandrum via Alleppey is strongly recommended for inclusion in the railway development plan. The doubling of the line between Cochin and Coimbatore is also to be given top priority.

6. Considering the fact that it is proposed to develop tourism on an industrial footing, it is essential to improve the air transport facilities in Kerala. The development of Trivandrum Airport into a major one with landing facilities for jet planes, development of modern airport at Cochin and construction of an aerodrome at Calicut in the order of priority are the schemes which the State considers important for inclusion in the Fourth Plan.

5.1 ROAD DEVELOPMENT

A pre-condition of economic development is a well managed road system. Roads have a considerable potential for creating employment and generating economic activity. The dearth of resources is a basic limitation in drawing up a road plan which can even foresee the future requirements in various sectors.

2. Spill over works will be given precedence over any other items of work. This is because the investments already made will have to yield benefits without undue delay. In the annual plans of 1967-68 and 1968-69 several urgent and important works were included. Priority will be given to the pending works during the Fourth Plan period.

3. The Fourth Plan proposals also include schemes for the improvement of existing roads. In the selection of these schemes the existing facilities of communication in the area, the importance of the locality and interest served etc., are fully taken into consideration so that the State as a whole will secure an integrated road system. Due importance will be given to the development of State Highways, major district roads, other district roads and village roads.

The following table provides the list of schemes to be taken up during the Plan period, the total financial outlay and achievement aimed at:

<i>Sl. No.</i>	<i>Name of Scheme</i>	<i>Outlay (Rs. lakhs)</i>
1.	Missing links (70 km)	1025.00
2.	Missing bridges—major and minor (130 Nos.)	
3.	Construction of new roads (200 km)	
4.	Upgrading the surface of roads (420 km)	
5.	Widening the carriage way to two lanes and widening and strengthening of bridges and culverts (7 bridges)	
6.	Strengthening of Carriageway (250 km)	
7.	Level crossings proposed to be replaced by over/under bridges (17 Nos.)	
8.	Bye passes in heavily built up towns (9 km)	
9.	Strengthening and reconstruction of major bridges in the State highways and District-roads (65 bridges)	
10.	Roads of general importance (100 km)	

5.2 ROAD TRANSPORT

Road transport is the major form of transport in the State. This underlines the importance of nationalised road transport services. Almost all States in India have adopted a policy of nationalisation under a statutory corporation of the Government. At present road transport systems in different States are under various stages of nationalisation. Kerala is a pioneer in this field. The Kerala State Transport Department was formed in 1938. In the first few years of nationalisation war time conditions presented many difficulties. During the Plan decade 1951-61 emphasis was on rehabilitation and a phased programme of development. The nationalised services were at first operated only on certain trunk roads, inter connecting the State headquarters at Trivandrum and the various district headquarters nearby. In most of the routes so nationalised, the private sector had not been completely eliminated. Certain skeleton express services were introduced along the main trunk routes. The services introduced have not been sufficient to make the public of the northern part of the State feel the existence and availability of a reliable system of nationalised bus service. The fast passenger services of the Corporation has provided a quick and cheap means of convenient transport. These fast passenger services are now operating around the clock mostly along the trunk roads of the State. The State Transport undertakes with its extensive net-work of services offers to the travelling public a co-ordinated and reliable transport system with linking facilities in all directions.

2. In Kerala the private sector commands and controls a fleet strength of 3445 buses. These buses operate in all the Districts in the State in competition with the public sector. It is true that the State Transport Department owns only 27% of the total number of public conveyances in the State. But as per passenger statistics it carries more than 42% of the total number of passengers. This is mainly due to the higher seating capacity of the State Transport buses as compared to the private buses.

3. The Kerala State Road Transport Corporation took over the service from the Kerala State Transport Department with effect from 1-4-1965. At the end of the Third Plan, the Corporation had a fleet strength of 1015 vehicles (925 buses, 53 lorries and 37 other vehicles), the total number of seats being 40524.

4. The Government of Kerala has accepted a policy of complete nationalisation of road transport passenger services in the State. A committee appointed by the Government to go into the question of nationalisation has made the following recommendations:

(i) The objective of nationalisation of bus transport in the State can best be achieved by implementing the programme of nationalisation in two stages covering a period of ten years. In the first stage, route wise partial exclusion scheme may be adopted as a matter of policy and the schemes may cover all medium (40 to 80 k. m.) and long distance (above 80 k. m.) routes on the basis of priorities. Area-wise nationalisation may be adopted to cover the second stage of total nationalisation.

(ii) The Kerala State Road Transport Corporation is the proper and suitable instrument to achieve the programme of nationalisation.

(iii) The workshop facilities of the Kerala State Road Transport Corporation for vehicle maintenance and body building have to be increased substantially. A new body building workshop will have to be set up either at Alwaye or Kozhikode.

(iv) The nationalisation of short routes may be taken up after the first stage is successfully implemented.

(v) Nationalisation of inter-State routes may be taken up separately.

5. The committee has estimated that the annual growth of passenger traffic is about 10%. Thus over the five year period there is necessity to provide for a 50% rise in passenger traffic. The Government while accepting the recommendations of the committee is of the view that the consolidation of the present service is of the utmost importance, and nationalisation and consolidation of the services should go side by side. The Fourth Plan proposals have been drawn up by and large based on the above facts.

The different schemes envisaged in the Plan and the outlay are provided in the table below:

Sl. No.	Name of Scheme	Fourth Plan outlay (Rs. lakhs)	Remarks
1.	Cost of buses	650.00	According to the Corporation's Plan an amount of Rs. 1060 lakhs will be needed for the schemes included in the Fourth Plan. This amount is worked out on the assumption that the Railways will contribute 50% of the capital investment. The investment is worked out as follows:—
2.	Land acquisition		
3.	Building and workshop		
4.	Plant and machinery		
5.	New body building unit		
6.	Compensation to private operators		
7.	Training facilities		
8.	Water transport (ferry services)		
			Rs. in lakhs
			State Plan provision 650
			Railway contribution 257
			Arrear contribution from railways 153
			Total 1060
The above investment includes the cost for purchase of 930 buses and acquisition of 800 bus schedules.			

5.3 PORTS AND HARBOURS

There are two intermediate ports and ten minor ports in Kerala, apart from the major port of Cochin which is a natural harbour. The minor ports handle commodities in import and export worth about Rs. 200 crores every year. All these ports are lacking even in minimum amenities required.

2. Port development has not been given necessary emphasis in the past Five Year Plans. In all the three plans together only a total expenditure of Rs. 55 lakhs was incurred on port development under the State sector. During the First Plan, a pier at Valiathura (Trivandrum) was constructed at a cost of Rs. 13.87 lakh and some improvements were effected to the ports of Alleppey and Calicut. Under the Second Plan, the development of minor ports at Alleppey, Kozhikode, Badagara, Tellicherry, Cannanore, Azhikkal and Ponnani were undertaken at a cost of Rs. 11.89 lakhs.

3. The Third Plan programmes aimed at making improvements in the minor ports of Trivandrum, Alleppey, Kozhikode, Beypore, Tellicherry, Badagara, Ponnani, Azhikkal and Kasargode. During the Plan period considerable improvements were made in the above ports. Items of work such as special repairs to the pier at Valiathura, improvement to trolley lines, construction of semi-permanent godown, canteen and waiting shed in Alleppey port, approach road to Azheekkal port, construction of equipment for Calicut port and quarters for port staff at Azhikkal port were completed. A total expenditure of Rs. 29 lakhs was incurred in the State sector during the Third Plan Period.

4. As regards Centrally sponsored schemes there was a provision of Rs. 155.65 lakhs in the Third Plan. The major programme included in this sector was the development of Neendakara port for which an outlay of Rs. 111.65 lakhs was provided. Other programmes included were the purchase of a dredger unit, installation of electric cranes at the ports of Calicut, Tellicherry and Azhikkal and provision of tugs, barges and lighterage wharf at Neendakara. Some preliminary works were completed at Neendakara port at the end of the Plan period. Of the total outlay of Rs. 155.65 lakhs under Centrally sponsored schemes a total expenditure of Rs. 83.83 lakhs was incurred during the Third Plan period.

5. It was felt that a Master Plan is necessary for the deep water development of selected ports, considering their natural facilities, existing traffic, possibilities of industrial growth and traffic generation and requirements. With this in view the Government of Kerala entrusted the work of preparing a feasibility report for the development of the following six ports to Messrs. Indopol (Private) Ltd.

1. Neendakara—cargo-cum-fishing harbour
2. Azhikode fishing harbour
3. Ponnai—cargo-cum-fishing harbour
4. Beypore (Calicut)—cargo-cum-fishing harbour
5. Thalai—fishing harbour
6. Azhikkal—cargo-cum-fishing harbour.

6. Indopol have completed the preparation of the report in which a total investment of Rs. 117 crores to be spread over a period of 15 years has been recommended. The recommendations of the Indopol have been considered in drawing up the Fourth Plan proposals for port development.

7. In the Fourth Plan an amount of Rs. 210 lakhs has been provided under State sector and Rs. 506.68 lakhs under Central sector for the development of ports and harbours. An important aspect connected with port development is the creation and maintenance of stable deep channel entrances from the sea, for which a multi-purpose sea-going dredger is necessary for periodical dredging. Under the spill over schemes the major

emphasis will be laid on the establishment of a lighterage port at Neendakara. The plan provision includes expenditure envisaged for one inspection cum pilot launch, two tugs, six lighters and two water barges.

8. Messrs. Indopol in their report has suggested that before actual works can be undertaken for any of the ports, detailed investigation and model studies will have to be done port-wise. Necessary provision has been made in the plan for acquisition of a sea-going dredger, and for detailed investigation and model studies for the ports of Neendakara, Beypore, Azhikkal, Ponnani, Azhikode and Thalai.

9. Emphasis will be laid on the development of Beypore and Neendakara ports in the Plan. The development of these ports will be so arranged as to provide the maximum return immediately and at the same time, ensure long term industrial growth in the hinter lands. Investment enabling fishery development will give returns and the much needed foreign exchange. Development of the ports into fishing harbours involves the deepening of seaward entrance channels, which again is the basic requirement of commercial harbours. This primary requirement will be met during the Fourth Plan in the case of Beypore and Neendakara ports. Outlay on these ports is shown in the Central sector.

The scheme-wise details proposed in the Fourth Plan are given below:—

PORTS AND HARBOURS
Scheme-wise details

(Rs. lakhs)

Sl. No.	Scheme	State sector outlay	Central sector outlay
SPILL OVER WORKS			
1	Beypore Port: Construction of a wharf for sailing vessels	1.28	
2	Neendakara Port: Establishment of a lighterage port at Neendakara	32.25	..
3	General: Dredging unit for internal dredging at intermediate and minor ports	0.75	..
4	Badagara Port: Further works relating to pier with electric cranes and formation of a road connecting the pier to the main road	0.01	..
NEW SCHEMES			
(a) General			
1	Purchase of a Multipurpose seagoing dredger	110.00	..

<i>Sl. No.</i>	<i>Scheme</i>	<i>State sector outlay</i>	<i>Central sector outlay</i>
2	Quarters for the Port Staff at the various ports	1.00	..
3	Preparation of Master Plan for development of six important Minor Ports, Investigation and Model studies	29.00	..
4	Harbour Engineering Wing and Hydrographic Survey wing	..	..
<i>(b) Calicut Port</i>			
5	Provision of lighted buoy for the cootarreef or a beacon	0.50	..
6	Extension of stacking platform and other storage facilities of North Pier and extension of slip-way at Beypore	2.06	..
7	One 100 ton water barge	2.25	..
8	Renewing the old tracks and track lines	3.60	..
9	Special repairs to the piers	5.00	..
10	Provision of spare lighted anchorage buoy	0.50	..
<i>(c) Alleppey Port:</i>			
11	One 200 HP. tug to replace one of the old tugs	5.00	..
	Special repairs to the pier	1.00	..
<i>(d) Ponnani Port</i>			
12	Slip-way for sailing vessels	2.00	..
<i>(e) Trivandrum Port</i>			
13	Minor works (wooden fenders, gang-way and special repairs to the R.C.C. Pier)	2.00	..
<i>(f) Azhikkal Port</i>			
14	Providing a lighted fair-way buoy for entrance channel	0.50	..

<i>Sl. No.</i>	<i>Scheme</i>	<i>State sector outlay</i>	<i>Central sector outlay</i>
15	Two sets of mooring buoys inside the river basin for coastal streamers coming to the port, at the rate of Rs. 1.5 lakhs per mooring buoy	6.00	..
16	2 Mooring boats at the rate of Rs. 20,000 each	0.40	..
17	One pilot launch	3.00	..
18	One light-house	2.50	..
19	(g) <i>Bey pore Port</i>		
	Fairway lighted buoys, 12 feet dia		2.00
	Channel marking lighted buoys, 9 dia (2000 ft. apart—each 10 Tons)	10.00	10.00
	Leading lights and breakwater lighting	..	1.00
	Lighterage wharf 1000 feet.	..	10.00
	Mobile cranes, 3 Nos. each 2 1/2 lakhs	..	7.50
	Floating craft 1000 HP. Tug.	..	40.00
	800 HP. Tug.	..	30.00
	Survey Launch	..	3.00
	Pilot Launch	..	3.00
	Mooring boats, 3 Nos.	..	0.50
	Mooring bouys 8 Nos.	..	12.00
	Land acquisition 200 acres	..	40.00
	Land acquisition—buildings	..	5.00
	Transit shed 2 x 30000 sq. d. ft.	..	12.00
	Approach road	..	28.00
	Miscellaneous (office, water supply, light etc.)	..	20.00
	Contingencies 3%	..	6.72
	Supervision 2%	..	4.48
20	(h) <i>Neendakara Port</i>		
	Dredging turning basin	..	32.80
	Dredging southern Arm	..	41.60
	Fairway lighted bouys, 12 ft. dia	..	2.00

<i>Sl. No.</i>	<i>Schema</i>	<i>State sector outlay</i>	<i>Central sector outlay</i>
	Channel marking buoys (lighted 9 ft. dia every 2000 ft. 10 Nos.	..	10.00
	Leading lights and breakwater light	..	1.00
	1000 HP. Tug	..	40.00
	800 HP. Tug	..	30.00
	Survey launch	..	3.00
	Pilot launch	..	3.00
	Mooring Boats 3 Nos.	..	0.50
	Ligherage wharf 500 ft.		5.00
	Mooring buoys 6 Nos.		9.00
	Miscellaneous (office, water supply, road lighting etc.)		20.00
	Mobile cranes 3 Nos.		6.00
	Land acquisition 70 acres		14.00
	Building acquisition		5.00
	Transit sheds 150 ft. x 50 ft. 2 Nos.		3.00
	Contingencies 3%		6.78
	Supervision 2%		4.52
	Total	210.00	506.68

5.4 OTHER TRANSPORT

Inland Water Transport

The State Water Transport Department was formed on 7-6-1968 by taking over the assets and liabilities of the State Inland Water Transport Service. The activity of the Department is confined to running the boat services of the water-logged areas of Kuttanad and adjoining regions. The operation of the boat services extend to four districts Alleppey, Quilon, Kottayam and Ernakulam. The question of extending the activities to other districts has not been taken up so far. The Department is now operating 48 schedules. The public favour speedy conveyance both for travel and transport of goods. Wherever road transport becomes possible between places served by boat service, invariably the boat service has to be stopped. This is what happened to Alleppey - Ernakulam, Alleppey-Quilon, Kottayam - Ernakulam and Vaikom - Ernakulam Services. Similarly the completion of Thanner mukkom bund and Edathva-Thakazhi road would be a set-back to boat services in

Kuttanad area. It is therefore not quite proper to embark on any great ambitious schemes of boat services. However the following schemes are proposed in the Fourth Plan in order to improve the working of Inland Water Transport in Kerala. The Schemes are categorised under two heads: (a) the schemes of the State Water Transport Department, and (b) the inland canal schemes of the Public Works Department.

2 The inland water transport schemes in the Fourth Plan mainly consists in the construction of two new boats, replacement of ten old engines with new ones, development of two dry docks sheds, purchase of tools, plant etc., and acquisition of land for dry dock, Directorate and stations. The outlay in the Fourth Plan for the execution of the above schemes is Rs. 10 lakhs.

3 In the Inland Canal schemes of the Public Works Department emphasis will be laid on spill over works and new works will be taken up according to its need and urgency. The outlay for the schemes under inland canal system of the Public Works Department is Rs. 20 lakhs.

Railways.—

4 The total length of Railways in Kerala has remained static at 888 k. m. since the formation of the re-organised State of Kerala. The potential development of the State's economy hinges to a great extent on the development of railway system. There is no broad gauge line south of Ernakulam and this hampers the movement of goods from the South to North. While additional railway facilities are to be provided in the industrially advanced areas of the State, it is also essential that facilities are provided in those areas which have growth potential. Taking into account the needs of the State the following items of work are suggested for inclusion in the Central sector schemes for railway development—

1. Construction of a new broad gauge line from Ernakulam to Trivandrum via Alleppey.
2. Doubling of the existing railway line from Cochin to Coimbatore.
3. Construction of a link line from Tellicherry to Mysore.
4. Construction of a link line from Kottayam to Bodinayakkannur via Peermade and Kumily.
5. Doubling the existing line from Shornur to Mangalore.
6. Construction of new line from Kuttipuram to Ernakulam via Ponnani, Guruvayoor and Cranganore.
7. Metlatpur-Feroke line.

Communications.—

5 The statistical position relating to tele - communication in Kerala Circle is as follows.—

1. No. of telephone exchanges (as on 31-3-1968)	193
2. No. of working telephone connections	29472
3. Number in waiting list	12776

6 About 20,000 lines are proposed to be added in the Fourth Five Year Plan. The Department of Tele-Communications has drawn up a programme for provision of large number of Trunk Circuits between the various townships within Kerala during the Fourth Plan period. A number of projects for introducing 8 channel system on the main routes have been initiated. More carrier circuits will be introduced between Trivandrum and Alleppey, Alleppey-Cochin, Kottayam-Peermedu, Trivandrum-Kottayam, Kottayam-Muvattupuzha, Ernakulam-Cochin Trichur - Palghat-Coimbatore, Cochin-Calicut, Calicut-Cannanore, Calicut - Mangalore etc. Co-axial cable system will be extended from Madras to Ernakulam, and from Ernakulam to Trivandrum via Kottayam and Quilon. Microwave radio link has been sanctioned between Coimbatore and Calicut and Kottayam-Alleppey. For introducing subscriber trunk dialing service, automatic trunk exchanges are proposed to be set up at Ernakulam and Trivandrum. This is expected to be finalised during the Plan period.

7 All District headquarters in Kerala State have been provided with Telephone and Telegraph facilities. The policy of the tele-communication Department is to provide telegraph facilities at stations having a population of over 5,000. The various items of work proposed under tele-communications fall under Central Sector scheme.

INLAND WATER TRANSPORT

Scheme-wise Details

<i>Sl. No.</i>	<i>Name of Scheme</i>	<i>Outlay (Rs. lakhs)</i>
1	Construction of new boats	10.00
2	Replacement of engines	
3	Development of dry dock	
4	Purchase of tools and plant	
5	Acquisition of land for dry dock	
6	Acquisition of land for Directorate and stations	
Total		10.00

**Scheme-wise details of Inland Canal Schemes of the
Public works Department**

Rs. lakhs

<i>Sl. No.</i>	<i>Name of scheme</i>	<i>State sector outlay</i>	<i>Central sector outlay</i>
<i>Spill Over Works</i>			
1	Excavating Badagara Mahe Canal	..	36.60
2	Reconstruction of Payyoli lock	3.15	..
3	Improvements to Elathur-Kallai Canal	1.02	..
4	Ollur Kunnamangalam canal	0.46	..
5	Improvements of canal from Cheriapally to Kuriappally	0.56	..
6	Improvements to Veli thodu	0.09	..
7	Improvements to Perumthodu	0.93	..
8	Constructing a retaining wall on the sides of the junction canal at Shertallai	0.30	..
9	Improvements to Karumady canal providing protection to the canal banks at Karumady bridge	0.20	..
<i>New scheme</i>			
1	Improvements to Chavara canal (3.3 km)	..	..
2	Do. to Sulthan canal (1 km)	..	..
3	Construction of a dry dock at Alleppey and workshop for repair and overhaul of craft dredger etc.	..	..
4	Improvements to west coast canal M. 21-28, 16-17 and 5-6 (20 km)	..	..
5	Acquisition of dredger and handcrane	..	..
6	Widening Chembakkara thodu	..	..
7	Opening Irimpana Pudussery Nadamel canal	..	60.00
8	Improvements to inland water transport facilities at Beyypore (Calicut region)	13.29	100.00
9	L.S. provision for completion of miscellaneous inland water transport schemes in progress (State sector schemes)	..	..
10	Improvements to west coast canal (Quilon Cochin section)	..	50.00
11	Improvements to West Coast canal (Trivandrum Quilon section)	..	25.00
12	Improvements to West Coast canal (Cochin to Pullot section)	..	25.00
Total		20.00	296.00

5.5 TOURISM

The tourist potential of Kerala is considerable. In planning tourism should find a more prominent place than it occupies now. The accommodation facilities for tourists visiting Kerala are woefully short of the requirements. Creation of sufficient accommodation facilities is therefore essential. Only a small percentage of foreign tourists visiting India have hitherto been attracted by the State.

2. The target fixed for foreign tourists visiting India at the end of the Fourth Plan is 6 lakhs. If adequate steps are taken it should be possible for Kerala to attract at least 1 lakh foreign tourists by 1974. This will require substantial investment for the creation of necessary accommodation and communication facilities and promotional activities. Both Private and Public Sectors will have opportunity to contribute to the development of tourism. Attracting Indian tourists from other States is as important as attracting foreign tourists. The number of home tourists may at least be double that of the foreign tourists. Besides developing the existing tourist centres like Thekkedy, Kovalam and Malampuzha development of new centres like Palaruvi, Kippad, Ezhumala, Thirumullavaram and Kumarakom is also conceived. The Kerala Tourist Corporation will undertake the construction of both first class and economy class hotels and running them. Provision has also been made to contribute to the share capital of the Tourist Corporation.

3. In State sector a few schemes for provision of additional accommodation facilities are included. The outlay of Rs. 7.50 lakhs under Periyar Wild life Sanctuary is mainly intended for the construction of a twenty-room hotel at Edappillyam and a twenty-five room hotel at Peermade. Expansion of the Periyar house by constructing thirty more rooms and the expansion of Aranyanivas are also contemplated. Additional accommodation facilities have already been provided as part of the Fourth Plan Scheme. Forty to fifty rooms will be constructed at Cochin and Trivandrum with dormitory type of accommodation. These rooms will belong to the economy class. Construction of additional Traveller's Bungalows at Cannanore, Kunnathunad, Kottayam and Alwaye is also envisaged in the Fourth Plan.

4. The most significant of the Central Sector Schemes is the integrated development of Kovalam. A hotel with hundred rooms and 25 cottages are proposed under this scheme. Also, amenities for sailing, water sports, swimming, etc., will be provided. To replace the motor boats at Thekkady and Cochin Port, two new motor launches will be acquired during the plan period.

Tourism—Scheme-wise details

Sl. No.	Schemes	State Sector	Central Sector
		(Rs. in lakhs)	
I. Spillover schemes			
1.	Integrated development of Kovalam	..	90.00
2.	Improvements to Rest House at Vaikom	..	0.50
8.	Purchase of Motor launches	..	7.00
4.	Conducted tours, etc.	0.50	..
5.	Development of Bekkal as Tourist Centre	1.75	..
6.	Development of Periyar Wild Life Sanctuary	7.50	..
7.	Expansion of accommodation facilities at Malampuzha	2.75	..
8.	Publicity	2.00	..
		14.50	97.50
II. New Schemes			
9.	Development of tourist facilities at Cochin and Trivandrum	..	8.50
10.	Construction of Tourist Bungalow at Cannanore	..	4.60
11.	Construction of Tourist Bungalow at Kuttanad	..	5.00
12.	Construction of Tourist Bungalow at Kottayam along back waters	..	3.00
13.	Improvements to Tourist Bungalow at Alwaye	..	6.00
14.	Kovalam Water Supply Scheme	5.00	..
15.	Development of Tourist centres at—		
(i)	Paluruvu	6.50	..
(ii)	Thirumullavaram	3.75	..
(iii)	Kumar kam	1.00	..
(iv)	Ponmudi	5.00	..
(v)	Ezhumala	3.75	..
(vi)	Kappad	2.50	..
16.	Construction of floating jetty at Periyar	2.00	..
17.	Tourist Development Corporation—Share Capital	5.00	..
18.	Provision for furniture	0.50	..
19.	Training of staff	0.50	..
Total (Tourism)		50.00	124.60

SOCIAL SERVICES

6.1 General Education

1. After independence the National Government came forward with a crash programme to expand educational facilities all over India together with a solemn constitutional assurance that education upto the age of 14 would be made free. It was perhaps the beginning of planned effort in education in India. Only quantitative expansion of education was meant under the new programme. Colleges and Universities sprang up all over India to impart higher education of the traditional type. Even professional education was allowed to go ahead in the traditional way. As a result of all these steps the time old balance between supply and demand in the field of education has broken down miserably. In States like Kerala educated unemployment has reached a stage of explosion.

2. The sophistication acquired during the secondary school course is such that most of the boys and girls have developed a sort of aversion for manual work. In short the educational effort of more than a lakh of students is a colossal waste. The time is up for the secondary education to be given a new direction with a view to avoid the colossal waste of energy and money sustained by the people every year. We have to be guided by the example of countries where general education itself is to a considerable extent polytechnical.

3. In view of qualitative improvement the following reforms are proposed to be implemented during the Fourth Five Year Plan.

- (i) Polytechnicalisation of general education from the middle school onwards.
- (ii) Raising the admission age to primary schools to 5½ plus.
- (iii) Institution of admission test at the secondary stage.
- (iv) Diversion of the less talented from the general stream of education at different stages.
- (v) Transformation of the pre-degree course to suit class room teaching of the secondary school.
- (vi) Selective admission to degree course.
- (vii) Rationalisation of post-graduate course and research under the universities.
- (viii) Control over the starting of schools and colleges.

4. In the modern state, education is much more than a social service. It is a long term national investment. As such it should be designed so as to promote the production potential of the young persons. It is therefore proposed to effect the necessary reforms in the existing system of education with the object of deriving maximum benefit, both personal and national. The Fourth Plan has been formulated against this background.

ELEMENTARY EDUCATION

Pre Primary Education:

5. Pre-primary education will be left exclusively to the voluntary agencies. State's responsibility will be limited to the training of teachers for pre-primary schools, (at present there are 3 Nursery Training Schools) organisation of service for the guidance of workers in the fields of pre-primary education and sanction of grant-in-aid to (selected) well-run schools.

Primary Education:

Additional enrolment in the age group 6-11.

6. The State has already provided schooling facilities for all children in the age-group 6-11. The additional enrolment expected during the Fourth Plan period is 4 lakhs. In view of the financial constraints, it is proposed to accommodate the additional enrolment by increasing the teacher-pupil ratio.

Minimum age for admissions:

7. In accordance with the recommendations of the Education Commission the age of admission will be raised from 5 to 5½ years plus. This will help to reduce the pressure of enrolment considerably.

Shift System.

8. It is proposed to abolish the shift system in Standard III. Resulting increase in expenditure will be offset by the saving arising from the introduction of shift in standards I and II throughout the State.

Stagnation and Wastage:

9. Steps necessary to arrest stagnation and wastage at the primary stage will be undertaken on a modest scale. The central working group suggested that Kerala should participate in the national programme of reducing wastage and stagnation at the primary stage on the lines recommended by the National Seminar.

Teacher-Pupil ratio and appointment of teachers:

10. The teacher-pupil ratio in standards III and above will be 1:50. In Standards I and II which will be run on shift, a more favourable ratio will be maintained. During the Plan period the number of primary school teachers is expected to go up from 106,200 to 112,700.

11. Provision has been made for the appointment of additional staff during the period at lower primary stage. Schemes have also been included for providing minimum furniture and equipment to new classes. Government's share on the cost of buildings to be additionally put up will be 50 per cent and the balance will have to be met by local contribution.

Additional enrolment in the age group 11-14:

12. Kerala has already achieved 59 per cent enrolment in the age group 11-14 years which is much higher than the national average. As the enrolment at the lower primary stage is 100 per cent it is not possible to arrest enrolment at the upper primary stage to the extent desired. Provision has been made for the appointment of additional teachers. The number of teachers in the secondary schools will increase from 25680 (1968-69) to 26480 by the close of the Plan period.

Mid-day meals:

13. The scheme for mid-day meals to needy children attending lower primary schools will be continued during Fourth Plan.

Hindi Education

14. Necessary funds have been allotted for the appointment of 500 Hindi Teachers during the plan period.

Improvement of physical conditions of the existing Department primary schools

15. Several of the Departmental primary schools lack the minimum physical facilities. Construction of buildings, acquisition of land and purchase of equipment for schools during the Fourth Plan are contemplated to improve the situation.

Construction of Buildings for the Inspectorate Office.

16. More sub-districts are proposed to be created. Several of the sub-district offices do not have their own buildings. Provision has been made for the construction of buildings for 8 to 10 sub-district offices.

Improvement of Science Education.

17. The State has decided to go ahead with the improvement of science instruction at the primary and secondary stages with immediate effect. New science curricula and text books will be prepared in the light of the recommendations of the Education Commission. The Fourth Plan includes schemes for laboratory accommodation in Departmental training schools and matching grants for laboratory buildings in private training Schools. Training of teachers will be undertaken on a large scale.

Work experience programme in selected U.P. Schools:

18. As an experimental measure, during the Fourth Plan, work experience programme will be introduced in a few upper primary schools with a view to create self-reliance in the children. The experience gained in the schools must enable them to produce useful and marketable articles. Also the children will be taught how to take up themselves the repair of all modern contrivances of daily use in their own houses. The programme in the Fourth Plan is expected to cover 1,20,000 students.

Improvement of pre-primary education:

19. During the Fourth Plan, a State Unit will be organised for improvement of Pre-Primary Education. The Unit will provide guidance and assistance to Pre-primary schools.

Teacher Education:

20. Improvement of the skills of teachers, particularly through inservice training will be taken on a priority basis. There are 104 teachers training schools in the State several of them are uneconomic in size and illequipped. Considering the present unemployment and future requirement of T. T. C. holders, about 42 training schools which are uneconomic in size and illequipped will be closed down.

Amalgamation of Training Schools and Strengthening of Departmental Training Schools:

21. In the interest of long-term economy and better organisation of programme, it is proposed to amalgamate Departmental training schools (where there are more than one training establishment under the department located very closely) in three places in the State. A few Departmental training schools will also be taken up for strengthening in respect of building, land and equipment.

Extension-cum-Inservice Training Centres:

22. It is proposed to open one centre in each Revenue District to serve as a centre of extension works with primary schools in the District and which will also provide for the inservice training of primary teachers on a whole-time basis.

Inservice Training of Primary Teachers, Teacher Educators, High School Teachers:

23. During the Fourth Plan period, Inservice Training to a limited number of primary school teachers, teacher-educators and high school Teachers will be given.

Secondary Education: Additional enrolment age group (14-17):

24. High schools will be opened only in places not served by existing institutions as revealed by the Educational Survey. A scheme of selective admission to high schools will be introduced during the Fourth Plan.

Improvement of physical conditions of Departmental Schools:

25. Provision has been made in the Fourth Plan for the construction of buildings, land acquisition, purchase of furniture and equipment for High Schools. As in the case of primary schools, State's share of the cost of school buildings will be proportionate to the community effort.

Construction of Buildings for District, Regional and Headquarters Offices:

26. Funds have been allocated in the Fourth Plan to meet the pressing needs in regard to permanent buildings including extension facilities to the Inspectorate and Directorate Offices.

Hindi Education:

27. The Fourth Plan includes proposal for the appointment of nearly 200 Hindi teachers during the plan period.

Improvement of Science Education:

28. The teaching of Mathematics and Science in the schools will be re-organised and improved on modern lines. Provision has been made for the introduction of revised curricula in Science and Mathematics from school year 1970-1971. Laboratory equipment will be supplied in high schools during the Fourth Plan.

Improvement of School Libraries:

29. During the Fourth Plan, library books, and furniture will be supplied to selected Department high schools.

Work Experience Programme:

30. As in the case of upper primary schools, a new secondary school will be selected for the introduction of work experience programme as a pilot project.

Scheme for Qualitative Improvement at School Stages: State Institute of Education:

31. The State Institute of Education with all its attached units will continue to function during the Fourth Plan also. An Educational Research Unit is proposed to be established. The State Institute will be strengthened in terms of staff and provision of programme.

Establishment of an Institute of Primary and Basic Education:

32. An Institute of Primary and Basic Education is proposed to be started during the Fourth Plan. A staff training centre will also be established.

Institute of Science including appointment of Subject Inspectors in Science:

33. The Institute of Science is responsible for the planning and implementation of all programmes connected with science education. Provision has been made for intensive inservice training of teachers of science in high schools. The programme of strengthening the Institute of Science will include schemes for designing simple scientific equipments for schools. The Fourth Plan envisages the appointment of 20 Subject Inspectors.

Improvement of Supervision:

34. Improvement of supervision is one of the key programmes contemplated on a priority basis. It is proposed to include the following schemes in the Fourth Plan.

(i) *Creation of 3 new Education Districts:*

35. In the interest of proper supervision of schools three more District Educational Offices will be set up during the Fourth Plan.

(ii) *Increasing the number of Sub-Districts:*

36. It is proposed to start 34 new sub-district offices during the Fourth Plan.

(iii) *Appointment of Subject Inspectors:*

37. For the detailed assessment of teaching of individual school subjects, it is proposed to appoint 27 subject inspectors. They are also expected to give the lead in redesigning subjects. Emphasis is laid on Teachers' Association in the Districts as one of the important means to raise the professional competence of the teachers.

(iv) *Staff Training Centre:*

38. Provision has been made for the organisation of regular training courses for Inspecting Officers at the proposed training centre.

Examination reforms:

39. The major tasks envisaged under examination reforms are the introduction of training courses and evaluation, publication of brochures and booklets on evaluation for the benefit of the teachers in Primary Schools, internal assessment, studies and investigation and strengthening of the evaluation unit.

Guidance and counselling programmes

40. It is proposed to organise Guidance Programme at the primary and Secondary stages. The programmes include continuous inservice training of teacher-educators and teachers at the primary and secondary stages in guidance and counselling.

Improvement of Text Books and provision for Supplementary Reading Materials:

41. The Department of Education, chiefly through the State Institute of Education, should necessarily bring out sufficient number of publications for improving the quality of education. Provision has been made for preparing and printing handbooks and instruction materials for teachers and supplementary reading materials for children including enrichment materials for gifted children and to establish research projects connected with improvement of curriculum and text books.

Revision and upgrading of curricula:

42. Revision and upgrading of curricula is considered as a key programme for qualitative improvement to be developed on a priority basis during the Fourth Five Year Plan and necessary financial allocation has been made for this programme.

Contribution to Regional Institute of English and organisation of English Language Teaching Centres:

43. Contribution to the Regional Institute of English, Bangalore will be continued. Provision has also been made for the organisation of English Language Teaching Centres for primary Teachers.

Language Teachers' Training Centre:

44. The Fourth Plan contains proposals for the establishment of a centre for training of teachers engaged in teaching regional languages, Sanskrit and Arabic.

State Unit for Audio-Visual Education:

45. The importance of using films and other audio-visual materials in instruction has been widely recognised and an Audio-Visual Unit is proposed to be started during the Fourth Plan.

OTHER EDUCATIONAL SCHEMES

Education of the Handicapped Children

46. Provision has been made for the training of teachers for the handicapped in the State, supply of equipment to schools and establishment of a model school for the handicapped attached to the Medical College, Trivandrum.

Development of Sanskrit at school stage:

47. Programmes are included in the Fourth Plan for the appointment of Sanskrit teachers in a few selected schools and also to undertake a minimum programme for improvement of Sanskrit education at school stage.

Scholarships:

48. It has been proposed to award additional scholarships to school children on merit-cum-means basis during the Fourth Plan. The number of scholarships is proposed to be enhanced from 100 in 1968-69 to 500 by the end of the Plan period.

Teachers' benefit scheme:

49. Assistance will be given to teacher organisations for approved programmes for the improvement of the quality of teachers.

Development of Physical Education:

50. It has been proposed to start short-term training courses in physical education for as many teachers as possible in Upper Primary and High School classes. Coaching programmes for pupils will be organised. Sports and games facilities will be extended. Specialised staff will be appointed in the Directorate to attend to all programmes of physical education.

Re-organisation of Pre-degree Course:

51. The Pre-Degree course of two years now conducted in the colleges will be so re-organised as to make it part of the Higher Secondary Course. To start with, the classes will be organised in the colleges themselves. But they will be kept under the supervisory control of an independent authority on which the University and the Department of Education have proper representation.

Local Educational Authorities:

52. Local Educational Authorities will be created with a view to raise local finances for the betterment of schools, to help local education officers in solving administrative problems in which teachers and managements are usually involved, to enlist local attention and co-operation for the better working of the schools, and also to plan further expansion of education.

Libraries

53. Provision has been made to improve the existing libraries and start new libraries wherever they are found essential.

Three Language Formulae:

54. Mother tongue will be made compulsory from Standard I onwards till the termination of the Secondary Education with Hindi, Tamil, Kannada etc., as alternatives to be offered as second language. English with other European Languages as alternatives will be offered as third language.

55. An archive house will be constructed during the Fourth Plan period. Installation of necessary machinery for renovation and rehabilitation of public and private archives will also be undertaken.

GENERAL EDUCATION (SCHOOL EDUCATION)

Scheme-wise details of fourth Plan outlay

(Rupees in lakhs)				
Sl. No.	Name of Schemes	State Plan	Central Sector	Private Sector
1	2	3	4	5
GROUP I—ELEMENTARY EDUCATION				
<i>Continuing Schemes</i>				
1.	Additional enrolment in age group 6-11	215.00	..	..
2.	Additional enrolment in age group 11-14	265.00	..	..
3.	Mid-day meals	20.00	..	..
4.	Improvement of physical conditions of existing Departmental Primary Schools	98.00	..	..
5.	Construction of buildings for Inspectorate Offices	5.00	..	..
<i>New Schemes</i>				
6.	Institute of Primary Education	5.00	..	..
7.	Improvement of Science Education	30.00	..	..
8.	Work Experience Programme in selected Upper Primary Schools	2.00	—	..
9.	Special programmes for reduction of wastage and stagnation	3.12	..	..
10.	Hindi Education	..	25.00	..
Total		643.12	25.00	..

1	2	3	4	5
GROUP II, TEACHER EDUCATION				
II. (a)	Primary	30.00	..	..
(b)	Secondary	5.00	..	..
(c)	Construction of Women's Hostel and acquisition of land for Govt. Training College, Teilicherry	2.00	..	..
(d)	Contribution to Regional Insti- tute of English and organisation of English Language Training Centres	12.00	..	..
(e)	Teacher's Benefit Schemes	2.00	..	..
(f)	Language Teachers' Training Centre	1.00	..	..
Total		52.00	..	..
GROUP III—SECONDARY EDUCATION				
<i>Continuing Schemes</i>				
12.	Addl. enrolment in age group 14—17	200.00	..	..
13.	Improvement of physical condi- tions of Departmental Secondary Schools	75.00	..	..
14.	Institute of Science including appointment of Subject Inspectors in Science	15.00	..	..
15.	Guidance and Counselling Pro- gramme	2.00	..	..
<i>New Schemes</i>				
16.	Improvement of Science Edu- cation	50.00	..	..
17.	Improvement of School Libraries	5.00	..	..
18.	Work Experience Programme in selected secondary schools	5.00	..	..
19.	Hindi Education	..	22.00	..
Total		352.00	22.00	..

1	2	3	4	5
GROUP IV—OTHER EDUCATIONAL SCHEMES				
20.	State Institute of Education	13.00	..	..
21.	Improvement of Supervision including Re-organisation of the Education Department	27.00	..	..
22.	Examination Reforms	3.00	..	..
23.	Improvement of Text Books and provision of Supplementary Reading materials	5.00	..	..
24.	Revision and upgrading of Curricula	2.00	..	..
25.	State Unit for Audio-Visual Education	1.00	..	..
26.	Education of the Handicapped Children	10.00	..	..
27.	Scholarships	19.00	..	..
28.	Development of Physical Education in Schools including grant to Scouts and Guides	10.00	..	..
29.	Development of Sanskrit at School stage	5.00	..	..
30.	Schemes for promotion of National Integration (Details to be worked out by the Ministry of Education)	..	50.00	..
31.	Libraries movement	10.00	..	..
32.	Construction of Building for District, Regional and Headquarters Offices	10.00	..	..
33.	Programmes for removal of backwardness including education for girls in selected areas	5.00	..	..
Total		120.00	50.00	..
Total—General Education		1,167.12	102.00	155.00

UNIVERSITY EDUCATION

There are 117 colleges for general education in Kerala State including the Sanskrit Colleges at Trivandrum and Thrippunithura. The annual intake at the degree level in Kerala is comparatively high. Educated unemployment is also on the increase. Hence it is high time to limit the rush of students for the degree courses. Something like a moratorium should be declared against the unceasing urge to start new Arts and Science Colleges. Instead, the establishment of more and more technical colleges should be encouraged. At the same time regional imbalances in the establishment of educational institutions must be ameliorated as far as possible. Considering these aspects provision is made for the establishment of a college in the Malabar area during the Fourth Plan period.

Re-organisation of Pre-degree Course

The Pre-degree course in the present set up of education is a waste. Those who go up for the pre-degree course are not developed enough to fit into the system of collegiate teaching now obtaining at the pre-degree level. It is highly desirable therefore, to re-organise the pre-degree course in such a way that the teaching is brought down to the secondary school level and the two year course is made a terminal one.

Adoption of Mother Tongue as Medium of Instruction

Instruction through the medium of mother-tongue will be more impressive, less time-consuming and easy for the students. As such, a phased programme is to be accepted for imparting higher education in the mother-tongue.

Study of languages:

At the pre-degree and degree levels the study of mother-tongue and its literature will be made compulsory. Hindi will not be offered as alternative to mother tongue.

Abolition of Oriental Title Courses:

At present only degree holders are permitted to do languages at University level. But the Oriental Title Holders like Vidwan, Sahitya Visarad etc., continue to be language teachers in Schools. They are not fit to handle other classes even as stop gaps. It is therefore highly desirable that the Oriental Title Courses be abolished along with a declaration by the Government that graduates alone will be appointed in Secondary Schools to teach languages.

Assistance to affiliated Colleges:

Many of the Colleges affiliated to the Universities are not having sufficient accommodation and equipment. Neither the Universities nor the Government is in a position to provide such

Colleges with financial assistance to tide over these difficulties. The University Grants Commission will be requested to assist these Colleges.

Calicut University:

There is a general feeling that the average standard in our Universities is falling and the rapid expansion has resulted in lowering quality. Most of the students come from comparatively or entirely uneducated homes and are economically backward to meet the expenses of education. Owing to the ever increasing growth of student population and the urge for higher education as a venue for economic prosperity, the establishment of more and more Colleges become necessary. During the last ten years the number of colleges in the State has increased to 157. It has become physically impossible for the Kerala University whose Headquarters is at Trivandrum, to extend its effective control to all the Colleges. Also the administrative work at the headquarters has become so heavy that its efficiency is very often questioned. Hence the Calicut University was established.

University Centre, Ernakulam:

The University of Ernakulam too is to take shape soon. This University will be a federal type of University whose activities will be confined to the "Greater Cochin" area and whose main emphasis will be on scientific research oriented to industrial development. The research programme of the University of "Greater Cochin" will be closely linked up with the technological needs of the industries.

Scheme for Management Development of Unemployed Engineering Graduates:

The present employment position of engineering graduates is far from satisfactory. Most of these graduates are bound to remain unemployed for some years to come. It is proposed to give them an intensive programme of Management Training. Such a programme is bound to be of great assistance to develop them and make them better acceptable to industrial undertakings all over the country. It will also enable many of them to start business ventures of their own. Provision is made to train 50 to 60 Engineering Graduates a year in the school of Management Studies in the Ernakulam University Centre.

Research:

It is highly desirable that the research departments under our Universities are overhauled and strengthened with better talent

from outside if necessary. As suggested by the Education Commission it is necessary to consider the question of setting up a Board of Research with powers to coordinate, supervise and guide the research projects undertaken by the Universities of Kerala with the object of avoiding duplication and waste.

Post-graduate Courses by University Departments:

The Departments of higher research under the University need not undertake post-graduate courses, the counterparts of which are already in existence in the major Colleges of the State. The number of M.As. and M.Sc.'s produced annually in the State is already far beyond the need.

Construction of Buildings and Playgrounds for Colleges:

During the Plan period, construction of buildings for the College for Women, Trivandrum, Government Victoria College, Palghat, Government Arts and Science College, Calicut and Government Sanskrit College, Pattambi is proposed to be taken up. In addition, construction of laboratories and lecture halls for the Government Brennen College, Tellicherry, Government College, Madappally and Government College, Kasaragod, will be taken up.

Construction of Staff Quarters:

The construction of staff quarters for the Government College, Madappally, is to be taken up and completed during the Plan period.

Strengthening of Educational Administration:

The educational administration at the Colleges and Directorate level will be strengthened.

University Grants Commission Schemes:

It is also proposed to implement the schemes assisted by the University Grants Commission. The construction of Ladies' Hostel for Government Victoria College, Palghat, Construction of Auditoriums for the University College, Trivandrum and Government Brennen College, Tellicherry is proposed to be taken up and completed. The University Grants Commission assisted scheme of the development of post-graduate studies in basic science subjects in the University College, Trivandrum and in the Maharajah's College, Ernakulam will be completed during the period. There is provision for the purchase of laboratory equipments for the College for Women and the establishment of the Text Book Libraries.

UNIVERSITY EDUCATION

Schemewise details of Fourth Plan Outlay

		(Rs. in lakhs)	
Sl. No.	Schemes	State Plan Outlay	U. G. C. Central Share
<i>Continuing Schemes</i>			
1	Building for Colleges	70.00	
2	Starting of New Courses	50.00	
3	Strengthening of Educational Adminis- tration	1.00	
4	Staff Quarters	5.00	
5	Implementation of U. G. C. Schemes	66.00	65.00
6	Grant-in-aid to Private Colleges	40.00	
7	Scholarships	10.00	
8	National Loan Scholarships		90.00
9	Study Tour	2.00	
10	Other Schemes	5.00	
		249.00	
<i>New Schemes</i>			
11	Starting of one Government College	15.00	
12	Language Institute	25.00	
13	Rural Institute, Thavanur	1.50	
14	Improvement of Training College (Matching contribution for Aid from U. G. C.)	1.50	1.50
15	Hostels for Law Colleges at Trivan- drum and Ernakulam (Rs. 4.50% lakhs each—Matching grant of 50% from U. G. C.)	4.50	4.50
16	State Archives	7.63	
		55.13	
17	University of Kerala including Ernakulam Centre	85.00	
18	Scheme for Management development of unemployment Engineering graduates, Trikkakara	5.00	
19	Kozhikode University	100.00	
20	Production of Literature in Malayalam language for use as media of instruction at University stage		100.00
Total		494.13	261.00

6.2 TECHNICAL EDUCATION

Development of technical manpower, both in quantitative and qualitative terms, occupies a very important place in the transformation of a traditional society into a modern one. Though this aspect of planning was recognised in the first three plans, and the progress achieved in the creation of training facilities during the second and Third Five Year Plan periods was considerable, due to lack of co-ordination in planning in the past, certain imbalances have developed over the years. This accounts for the widening gap between the demand and supply of the technical personnel. Future planning in the field of technical education will necessarily have to take into account the problem brought to light by the increasing backlog of unemployed technical personnel.

2. At the end of the First Five Year Plan, the State had only one Engineering College and four Polytechnics. As a result of the developments in the Second and Third Five Year Plan periods, by the year 1966 the number of engineering colleges increased to six and polytechnics to seventeen. The admission strength has been reduced by 20% from 1968-69 onwards in view of the unemployment position of technically qualified persons. In addition, twenty junior technical schools were also established. New courses in architecture, telecommunication, chemical engineering and some other branches of engineering were started at the engineering colleges at Trivandrum and Trichur during this period. A few new courses were introduced in the Polytechnics as well.

3. Technical education in the State at the diploma and degree level is too out-moded and traditional courses seemed to have outlived their uses. It has, therefore, become necessary to revise these courses and make them up-to-date. Also new technological courses will have to be organised so that technical education in the State is more and more oriented to the requirements of modern industries.

4. In our system of technical education on the job training is not generally provided for with the result that those who undergo the traditional courses of engineering and technology fail to develop the necessary self-reliance and technical skill which would enable them to organise production units on their own initiative. A programme will be chalked out for the proper utilisation of the idle engineering skill of the state under which facilities will be provided for orientation courses involving also actual experience in the production of useful articles.

5. The intake capacity of the engineering institutions will be more realistically planned by taking into account the future requirements. Necessary action will also be taken to reduce the pupil wastage in engineering institutions.

Engineering College, Trivandrum:

6. At present the institution does not have facilities and amenities both for staff and students. Provision has been made for the acquisition of land, construction of buildings and hostels, staff quarters, protected water supply, play-ground etc. Provision has also been made for the purchase of equipments.

Engineering College, Trichur:

7. As in the case of the Engineering College, Trivandrum, additional buildings for College, hostel and staff quarters will be provided and some more new equipments will be purchased. It is proposed to introduce post-graduate courses in selected subjects in the college during 1970-71.

Regional Engineering College, Calicut:

8. In the case of the Regional Engineering College, Calicut, necessary provision has been made for meeting the recurring expenses and to provide for its expansion.

Grant-in-aid to Private Engineering Colleges:

9. Necessary funds have been allocated for giving grants-in-aid to T.K.M. College of Engineering, Quilon, N.S.S. College of Engineering, Palghat and M.A. College of Engineering, Kothamangalam.

Polytechnics:

10. It is proposed to develop the Central Polytechnics Trivandrum, M.T.I. Trichur, Government Polytechnics at Kalamasserry, Kottayam, Calicut, Perinthalmanna, Cannanore and Sree Ram Polytechnic, Valapad. Construction of buildings and hostels, purchase of equipments and appointment of additional staff will also be undertaken. A new course on Fishery Technology at the Calicut Government Polytechnic is also contemplated.

Grant-in-aid to Private Polytechnics:

11. Necessary funds have been provided in the plan for giving grant-in-aid to Private Polytechnics.

Junior Technical Schools:

12. At present there are 21 Junior Technical Schools for which outlay is given for land acquisition, construction of buildings, hostels and staff quarters. Necessary equipments will also be purchased and additional staff appointed.

School of Arts, Trivandrum:

13. The provision is for introduction of National Diploma Course in applied Art at the School of Arts, Trivandrum and for the re-organisation of existing certificate courses.

Centres for Diploma Course in Commercial Practice:

14. During the Fourth Five Year Plan it is proposed to introduce a Diploma Course in commercial practice in some selected Polytechnics of the State, as suggested by the V.K.R.V. Rao Committee in their Report on Commercial Education in India.

Directorate of Technical Education:

15. The provision is for the development of the Directorate of Technical Education and for the purchase of a Van.

Scholarships, Stipends etc:

16. The scheme for granting loans, scholarships and stipends to needy and bright students studying in engineering institutions, already introduced during the Third Plan, will be continued in the Fourth Plan. Additional amount has also been provided for the probable increase in the number of students.

Students' Amenities:

17. Provision has been made for students amenities like canteen, cycle sheds etc., for various institutions under the Department.

Part-time Courses:

18. Part-time courses for Diploma which are being conducted in four polytechnics in the State will be continued during the Fourth Plan.

School for Printing Technology:

19. An institution for training students for Diploma in printing technology has been started in Shoranur during 1967. This institution is proposed to be expanded during the Fourth Plan.

Vocationalisation of Secondary Schools:

20. The provision is to give basic Engineering Workshop training in the Junior Technical Schools for the Students of Standards VIII and IX in the nearly Secondary Schools.

Other Schemes:

21. Other schemes include training for secondary school students in the use of elementary tools and conducting work camp for them in Junior Technical Schools and Polytechnics, follow up action on trainees from Junior Technical Schools, Polytechnics etc.

TECHNICAL EDUCATION

Schemewise details of Fourth Plan Outlay 1969-74

(Rs. in lakhs)

Sl. No.	Schemes	State Plan Outlay	Central Sector
<i>Continuing Schemes</i>			
1	Engineering College, Trivandrum	15.00	
2	Engineering College, Trichur	8.00	
3	Regional Engineering College, Calicut		50.00
4	Grant-in-aid to Private Engineering Colleges	15.00	
5	Grant-in-aid to Private Polytechnics	30.00	
6	Government Polytechnics	40.00	
7	Women's Polytechnics	11.50	
8	Junior Technical Schools	35.00	
9	School of Arts, Trivandrum	2.50	
10	School of Printing Technology, Shoranur	23.00	
<i>New Schemes</i>			
11	Centres for Diploma in Commercial Practices	2.00	
12	Students Amenities	4.00	
13	Vocationalisation of Secondary Schools	4.00	
14	Re-organisation of Degree Courses	4.50	
15	Diversification of Diploma Course	20.00	
16	Faculty Development	1.00	
17	Scholarships	5.00	
18	Directorate of Technical Education	1.00	
19	Staff Quarters	2.00	
20	Part time course	0.50	
21	Sri Rama Polytechnic, Valappad	1.00	
Total		225.00	50.00

6.3 CULTURAL PROGRAMMES

1. *Development of the Swathi Thirunal College of Music and Music Academies:*

The Swathi Thirunal Academy has been raised to the status of a college from 1962-63 for imparting instruction in different branches of music. The plan provision is intended for the further development of the institution. It is also proposed to undertake development of the Music Academies.

2. *Development of Shri Chithra Art Gallery:*

It is proposed to construct an Art Gallery building with modern amenities and with two separate sections, one for painting and the other for sculpture. It is also proposed to construct an auditorium of a small size. In view of the educative value of lectures on art and the need for enlightening the public on aesthetic experience, it is proposed to provide adequate facilities for such lectures. Provision will be made for the purchase of paintings, models and sculptures. A well illustrated book with descriptive notes on the art of Raja Ravi Varma will be brought out during the Fourth Plan period.

3. *Compilation of the history of Kerala:*

A provision of Rs. 1.75 lakh has been made for giving financial assistance to the History Association, Ernakulam, for the preparation of the history of Kerala.

4. *Kerala Sahitya Academy:*

The Academy has various schemes for the development of Malayalam language and literature. Provision has been made for giving grant-in-aid to the Academy for the implementation of those schemes.

5. *Kerala Kalamandalam:*

Kerala Kalamandalam is the pioneer institution imparting instructions in Kathakali and other ancient arts of Kerala. The provision is intended for the development of the activities of Kerala Kalamandalam.

6. *Sangeetha Nataka Academy:*

Existing schemes will be continued during the Fourth Plan period also.

7. *Memorials for men of arts and letters:*

Memorials have already been erected for Thunchathu Ezhuthachan and Kumaran Asan. It is proposed to continue schemes to erect memorials for Kunchan Nambiar and other eminent poets and writers of Kerala.

8. *Financial assistance to men of arts and letters:*

The scheme is for giving financial assistance to men of arts and letters in indigent conditions. Two-thirds of the expenditure will be met by the Central Government.

9. *Kerala Lalitha Kala Academy:*

The Academy was formed in 1962 with a view to encourage fine arts like painting, sculpture etc. The provision is meant for giving grant-in-aid to the Academy for continuing the present activities and also for the construction of a building.

10. *Kerala Gazetteers:*

It is proposed to complete the work connected with the preparation of district gazetteers. The preliminary work on the State Gazetteer series and the history volume of this series will also be taken up. It is also proposed to take up the work of translation of the district gazetteers into Malayalam.

11. *Development of Archaeology:*

The three sections viz., preservation, photography and excavation already started will be continued during the Fourth Plan.

12. *Development of Museums:*

The provision is for the development of the existing museums at Trivandrum and Trichur.

13. *Grants to Sports Council:*

Provision has been made for giving grants to the sports council for undertaking schemes such as organisation of sports activities, building up of stadium and playfields.

CULTURAL PROGRAMMES

Sl. No.	Schemes	(Rs. in lakhs)	
		State Plan Outlay	Central Sector
1	Development of S. S. T. College of Music and Music Academies	2.00	
2	Development of Sri Chitra Arts Gallery	3.00	
3	Compilation of History of Kerala	1.75	
4	Kerala Sahitya Academy	2.00	
5	Kerala Kala Mandalam	2.00	
6	Sangeetha Nataka Academy	1.75	
7	Memorial for Men of Arts and Letters	1.00	
8	Financial Assistance to Men of Arts and Letters	2.00	
9	Kerala Lalitha Kala Academy	1.00	
10	Publication of Kerala Gazetteers and District Gazetteers	1.00	
11	Development of Archeology	2.00	
12	Development of Museums	4.00	
13	Grants to Sports Council	3.00	
14	Erection of Small Train	1.50	
15	Encyclopaedia	4.00	
16	Improvement of Zoological gardens	2.75	
17	Spill-over Schemes	2.00	
18	Financial Assistance to authors for publication of Books	2.00	
Total		38.75	

6.4 HEALTH SERVICES

Kerala is in the forefront of the States in India with regard to the availability of medical services. The target of one hospital bed per thousand of the population laid down in the Mudaliar Committee Report has already been achieved in the State—as against one bed for every two thousand of the population in India as a whole. Spectacular progress has been achieved in the control of communicable diseases, Malaria, for example is totally eradicated. The per-capita expenditure on Health Services in Kerala is estimated to be Rs 6.82 as against Rs 4.30 in India during 1968-69.

2. Medical and Public Health facilities have expanded considerably during the past few years of planning in Kerala. During the Third Five Year plan the expenditure incurred on this account amounted to Rs 1598.49 lakhs as against Rs 655.46 lakhs in the Second plan and Rs 258.96 lakhs in the First Plan. At the end of the Third Plan period there were 491 medical and public health institutions in Kerala with a total bed strength of 18526. These were raised to 529 and 20279 respectively by the end of 1968-69. The total number of beds is expected to increase to 20,000 by the end of the Fourth Plan.

3. Though Kerala is better placed than most other Indian States with regard to the availability of medical facilities the existing institutions lack proper equipments and supplies. Hence the main emphasis in the Fourth Plan will be on the stabilisation and qualitative improvement of the existing facilities. An outlay of Rs 1050 lakhs is proposed in the Fourth Plan for Health Services. The individual items are discussed below.

MEDICAL EDUCATION AND RESEARCH

Medical College, Trivandrum:

4. Started in 1951, the Trivandrum Medical College, was expanded considerably during the first three- Plans. It is proposed to organise training programmes for Physiotherapists, Occupational Therapists, X-ray Mechanics, Graduate Laboratory Technicians, Medical Record Librarians etc., during the Fourth Five Year Plan.

5. Provision has been made for the development of undergraduate and post-graduate medical education and dental education. It is proposed to organise an institution of Physical Medicine and Rehabilitation. Specialists' service will be organised in the hospitals. Provision has been made for expansion of hospital services, amenities to the students, staff, residents, patients etc. It is also proposed to establish a Cancer Unit in the Medical College Hospital.

6. The Centre at Trivandrum has been developed as a Centre for higher medical education and research. The other centres offer specialised health services to the people. Teachers in the Medical Colleges will be further encouraged to undertake Research along with teaching.

Medical College, Kottayam:

7. Provision is made for the construction of buildings for the College, College Hospital, Isolation Hospital and Residential Quarters etc., the completion of spill over works, and appointment of additional staff and purchase of equipments. It is also proposed to establish a Cancer Unit in the Medical College Hospital, Kottayam.

Medical College, Calicut:

8. Provision has been made for the construction of buildings, purchase of equipments and for the appointment of additional staff. The Fourth Plan envisages an expression in the annual outturn of M.B.B.S. degree holders from 145 to 160. One Cancer Unit will be established in the Medical College Hospital, Calicut. More post-graduate courses are proposed to be started during the Plan period.

Medical College, Alleppey:

9. The Medical College, Alleppey, started in the private sector, was taken over by the Government very recently. No new scheme has been proposed for this in the Fourth Plan. An amount of Rs. 24 lakhs is provided for the spill over scheme relating to the Alleppey Medical College.

CONTROL OF COMMUNICABLE DISEASES

Bureau of Epidemiology:

10. The National Malaria Eradication Programme is in its maintenance stage and the National Small Pox Eradication Programme is expected to continue during the Fourth Plan, as this programme is not yet ready to enter into the maintenance phase. It is also proposed to embark on a Cholera Control Programme in view of the endemicity of this disease. It has therefore been proposed to start a Bureau of Epidemiology during the Fourth Plan.

Tuberculosis:

11. The District T. B. Control Programme has been implemented in all Districts. There were 19 T. B. clinics in Kerala during 1968-69 and 31 more are proposed to be started during the Fourth Five Year Plan. Adequate funds are set apart for providing additional treatment facilities in the existing hospitals, for additional wards, improvements etc., and for supply of drugs. It is also proposed to provide some more T. B. isolation beds.

Leprosy:

12. 100 more S.E.T. Centres for Leprosy are proposed to be established. Physiotherapists will be appointed in all District Head Quarters. Provision has been made for a Reconstructive Surgery Unit which will be started at Leprosy Sanatorium, Noornad. Scheme for the rehabilitation of Leprosy patients will also be implemented.

Filariasis:

13. At present there are 19 Units located in Filaria Endemic areas and one Headquarters Unit under the National Filariasis Control Programme. It is proposed to intensify the Filariasis Control Programme during the Fourth Five Year Plan.

V.D.:

14. At present there are V.D. Clinics in all District Hospitals and Collegiate Hospitals. More Clinics are proposed to be established during the Fourth Plan in major Taluk hospitals.

Trachoma:

15. About 8% of the population are affected by this disease. At present there is only one Trachoma Control Unit in the State. As a first step, it is proposed to start one or two Mobile Units for the treatment of this disease. It is observed that there are at least 2 lakhs blind people in the State, and a crash programme against preventable blindness is necessary and provision has been made for this.

TRAINING SCHEMES

Training of General Nurses, Public Health Nurses and Non-Medical Leprosy Assistants:

16. At present there are 9 Nurses Training Centres with an annual intake capacity of 250 candidates. This will be continued during the Fourth Plan. Of the 250 candidates, about 150 will be trained as non-stipendiary candidates with a bond to serve Government for one year and the remaining 100 as stipendiary candidates. Provision has also been made for the construction of buildings for the accommodation of student-nurses, for class rooms, etc. There are at present 1,829 nurses in the service. The present pattern of staff is one nurse for ten beds which will be revised as one for 7 beds. This will require an additional number of 648 nurses. Provision has been made in the Plan for raising this staff pattern. It is proposed to give training to 15 candidates additionally every year as Public Health Nurses. Provision has been made for the training of non-Medical Leprosy Assistants and 40 candidates will be trained annually for 3 years.

Training of Doctors in Leprosy, V. D., etc.

17. Medical Officers in service are proposed to be trained in the treatment of V. D., Leprosy, T. B. etc., and for Laboratory Services, Anaesthesia, Radiology, D.M.C.W., D.P.H., etc. The training facilities available in the Medical College, Trivandrum will be utilised for this purpose.

Orientation Training for Medical Officers and Para-Medical Personnel:

18. The Orientation Training Centre, Neyyattinkara and the Public Health Training School, Trivandrum will continue. Medical Officers in service will be given training in the Orientation Training Centre and Para-Medical Personnel in service in the Public Health Training School.

Training of Health Visitors and Laboratory Technicians:

19. It is proposed to start a new school for the training of Health Visitors. More Laboratory Technicians are required for working in Taluk hospitals and it is therefore proposed to introduce a training course for training more candidates as Laboratory Technicians.

MEDICAL CARE

Primary Health Centres:

20. Of the 163 Primary Health Centres, 52 are housed in rented buildings. It is proposed to provide hospital buildings, staff quarters and other facilities to as many Centres as funds become available.

Construction of Paywards and addition to Hospital Beds:

21. At the end of March 1969 there were 529 Medical and Public Health Institutions in Kerala with a total bed strength of 20,279. Of these 15 were grant-in-aid institutions with 1,194 beds. It is proposed to provide 3,000 beds in the various hospitals during the Fourth Plan. The construction of 10 Payward rooms in each Taluk hospital and 20 more in District and other major hospitals will be undertaken.

Revision of Staff Pattern in Hospitals:

22. It is felt that in most of the hospitals especially in District and General Hospital, staff available according to the pattern fixed during 1961 is quite insufficient to meet the requirements. Provision has been made for appointing additional staff in accordance with the actual number of inpatients and also in relation to the rate of increase of out-patients.

District Polyclinics and Enlargement of Existing O. P. facilities:

23. Construction of District Poly Clinics for accommodating the Out-Patient Departments in certain district hospitals on modern lines is being taken up now. It is proposed to make available these facilities in other hospitals also. The present out-patient Department of District Head Quarters Hospitals have meagre accommodation. Steps will be taken to provide adequate accommodation.

Establishment of Emergency Medical Services:

24. Additional staff are now available in all district hospitals for full-time duty in casualty sections. It is proposed to establish emergency observation wards of 10 beds in each of these units. Adequate supply of furniture equipments and medicines will be ensured in these units. Ambulance vans are proposed to be purchased for use in major hospitals.

Dental Health Services:

25. Dental Clinics function in all District and General hospitals, Collegiate hospitals and in certain taluk hospitals. It is proposed to establish Dental Clinics in the remaining taluk headquarters also during Fourth Plan.

Mental Health:

26. It is proposed to improve the three Mental Hospitals in the State. Alterations and additions to the existing buildings and construction of additional pavilions of open type to accommodate more patients are urgently required. Provision has been made for additional staff, ambulance van and for improvements such as constructing occupational therapy ward etc. It has also been proposed to establish psychiatric clinics, children's wards, guidance clinics etc., in all the district hospitals.

Blood Transfusion and Resuscitation Services.

27. At present Blood Bank Services are available in major hospitals only. It is proposed to extend the service to Taluk hospitals also.

Rehabilitation of Handicapped.

28. Provision has been made for the appointment of physiotherapists in district headquarters and for the supply of prosthetic and orthotic appliances to the physically handicapped.

Specialist Services in peripheral Medical Institutions and Central Sterile Supply.

29. It is proposed to make available specialists' services in Taluk hospitals. Central Sterile Supply Units, which collect stores, processes and distributes articles used in the treatment of the sick are also proposed to be established in district hospitals.

Paediatric Units:

30. There is a regional linking up of paediatric units in the State at present. It is proposed to strengthen these units further during Fourth Plan by providing additional accommodation. It has been proposed to start at least 15 new units attached to taluk headquarters hospitals and to establish Advisory Committees on Maternity and Child Health Services in all the districts.

X-ray, E.C.G. and Cardiac Units and new dispensaries:

31. X-ray and E.C.G. are urgent necessities in taluk headquarters hospitals. Out of the 55 taluk hospitals, only 10 have X-ray units. E.C.G. units are now provided in district hospitals only. Provision has been made to make available X-ray and E.C.G. Units in all the Taluk headquarters hospitals. It is proposed to establish Cardiac units, and a few more dispensaries in all districts.

Improvements to Hospital Staff Quarters:

32. Rented buildings need to be replaced by permanent ones and residential accommodation should be provided to the staff of the medical institutions. During the Fourth Plan period it is proposed to take up these items to the maximum extent possible.

OTHER SERVICES—HEALTH

Health Organisation, Public Health Laboratories, Nutrition:

33. For the implementation and evaluation of Plan schemes it is proposed to appoint additional staff. The Public Health Laboratory, Trivandrum is the central laboratory of the State and it has to be modernised. It is proposed to develop all the 7 sections of the laboratory and to introduce modern techniques. Regional laboratories at Kozhikode and Ernakulam and district laboratories at Quilon, Alleppey, Kottayam, Palghat, Trichur and Cannanore and taluk Laboratories will also be developed. Provision has been made under nutrition programme for the appointment of additional staff and purchase of equipments and chemicals.

Students' Health Programme (School Health Services):

34. The school health programme as it works at present does not provide the necessary health inspection of the school children. The present school health services will be augmented by appointing full-time medical officers for attending to a prescribed number of students. Medicines and other treatment facilities for the students will be made available at the nearest primary health centre. The medical officer will arrange regular visits to the school for a thorough medical check up of students. All the schools in the State will be brought under this programme. There will be regular follow up and those cases requiring special treatment will be directed to the major hospitals in the locality. A health history card for every pupil in the school will also be maintained. Such a procedure will guarantee building up the health of the school children and in the long run many chronic illness or physical handicaps can be prevented. A fee of Re 1 will be collected from students in each year at the time of admission to each standard for school health services. By utilising this fund, it is proposed to organise student health centres in the district headquarters and taluk headquarters which would provide follow up treatment facilities.

35. It is proposed to modernise and upgrade the Government Analyst Laboratory, Trivandrum and to extend the P.F.A. act to all panchayats. Provision has also been made for the analysis of water from all protected water supplies in the urban and rural areas. Training will be given to officers and food inspectors. Regional Analyst Laboratories at Ernakulam and Kozhikode will be established. Provision has also been made for pollution control scheme.

Health Education and Organisation of Exhibition Units:

36. Every public health scheme, whether for control of communicable disease or expansion of environmental sanitation, has got an education content which is very vital to ensure its success. For the effective functioning and development of the health education activities. It is proposed to organise an exhibition unit and provision has been made to produce display equipments and to purchase models and other exhibits.

Advance Training in Health Education for Health Education specialists:

37. It is proposed to send officers in the Health Education Bureau for training in batches every year.

Purchase and production of Educational Aids and Equipments:

38. Provision has been made for the purchase of educational aids like film, filmstrips etc., for the newly formed and existing health education units. It is also proposed to provide equipments like vehicles, and audiovisual units including projector, generator etc., for the district health education units.

Strengthening of Technical Library and Building for Health Education Bureau:

39. It has been proposed to organise technical libraries in all districts besides those already existing in the Directorate and in the Field Study Demonstration Centre attached to the Health Education Training Unit. In order to house the Health Education Bureau, it is proposed to construct a building.

Improvements to Medical Stores Organisation and Manufacturing Section:

40. Prompt and efficient distribution of hospital supplies is a basic requisite for better and efficient health services. The stores organisation have to be augmented and better equipped to meet the increase in demand promptly. Provision has been made for the organisation of inspection wings for additional vehicles and to introduce Cardex system of accounting in district stores. Provision has also been made for spill-over works on buildings for District Medical Stores. There is already a manufacturing unit attached to Government Medical Stores manufacturing tablets and repacking chemicals. Provision has been made to expand this unit and set up a concern to manufacture most of the drugs required for the State hospitals. It has been proposed to install power laundries in the major hospitals.

Training in Hospital Pharmacy & Central Sterile Supply:

41. It is proposed to give pharmacists (degree holders) training in the Hospital Pharmacy and Central Sterile Supply to render them eligible for appointment to positions of responsibility in management and administration of Hospital and Pharmacy Service in the country.

Health Transport, Instrument repairing and Health Equipment Management organisations:

42. The construction of the garrage for health transport vehicles is proposed to be completed during Fourth Plan. The building for instruments repair wing will also be completed. The scheme for Health Equipment Management Organisation involves construction of buildings, installation of water supply, sanitary and electrical fittings, purchase of heavy machines, tools, equipments, furniture etc. Adequate provision has been made for the scheme. Triple Immunisation will be continued during the Fourth Plan.

Statistical Section:

43. Statistical sections have been established in all districts headquarters. It is proposed to strengthen the staff at the district and State levels.

Cooperative Medical Institutions:

44. Medical cooperatives will be organised by the local community and full-time doctors will be appointed in the dispensaries attached to the co-operatives. Initially the cooperatives will be required to pay the salary of the doctor. The pay and allowances of the auxiliary personnel and the rent for accommodation of the dispensary will be borne by Government for a specified period during which the societies are expected to arrange their own accommodation. Government will also supply such drug mixtures as are usually made available to Government dispensaries.

Group Practice Assistance:

45. Assistance will be given to groups of 4 or 5 doctors who will join together to start a medical institution of their own. The department will provide the initial expenses for starting such a centre. The group will be responsible for the proper functioning of the institution and for repayment in cash of the assistance received from the department in the form of pay and allowances of the staff, rent and equipments and medicines. 50 such units are proposed to be organised during the Fourth Plan.

Individual Practice Assistance:

46. A newly graduated young Doctor in our State may not be in a position to invest the required money to set up his own practice. But in case he is provided with money to start a Dispensary he will naturally be inclined to set up an establishment in a suitable locality. Further, Doctors in private practice usually prefer working in Cities or Towns with the result that while there is a rush of Doctors in the Cities, there are rural areas where there is not a single medical graduate available. It is proposed to establish such institutions by giving necessary financial help for the construction of dispensary building and to meet the other initial expenses.

Study of the Morbidity Pattern:

47. It is proposed to study the pattern of morbidity in the State and to organise the service based on the pattern of morbidity prevalent at present. In the curriculum for training programme information obtained on morbidity pattern will be incorporated and the training programme suitably geared up to meet the health needs of the people.

Pre-School Feeding:

48. A sum of Rs 40 lakhs is included in the Fourth Plan for feeding pre-school children. The scheme is intended to improve the health of children at pre-school level. It will be started with the materials supplied by CARE.

Improving the Standard of treatment in Hospitals and Public Health Centres:

49. A Public Health Centre and a Hospital will be selected in each District to be developed as model centres of modern health care.

Accreditation by Hospitals:

50. Though some of the private hospitals are doing excellent work, a number of institutions are not upto the standard. There is need for setting up a committee which may visit the medical institutions and inspect them once in two or three years and recognise them as suitable institutions or refuse recognition. Such a procedure will guarantee proper development of medical institutions and will certainly promote standards in medical care.

Health Home in Panchayats:

51. For setting up new dispensaries in some selected Panchayats, it is proposed to supplement the local contribution by a matching grant by the State. These dispensaries are proposed to be run by Panchayats.

Family Planning:

52. The programme of Family Planning operated now as a Centrally Sponsored Scheme does not provide for the flexibility needed to develop family planning services to suit the local requirements of the people. It is possible to improve the family planning programme through improvement of health services in primary health centres, Taluk hospitals etc., utilising family planning funds. This will be taken up during Fourth Plan. The mass education and motivation programme will be intensified during the Fourth Plan. ...

Drugs Control:

53. A sum of Rs. 12.30 lakhs is earmarked in the Fourth Plan for the working of the Drug Testing Laboratory at Trivandrum.

Indigenous system of Medicine:

54. Apart from the three Ayurveda Colleges at Trivandrum Thripanthura and Trichur there were 41 Ayurvedic and Homeo Hospitals and 242 Dispensaries in Kerala at the end of March 1969. There were altogether 607 beds in these institutions. Provision has been included in the Fourth Plan for increasing the number of institutions and bed strength in the hospitals. Provision is also made for post-graduate research in Ayurveda Colleges.

55. Government are also encouraging the Homeopathy and Unani systems of medicine. A Homeo Medical College was started in the private sector at Kurichi, Kottayam District, during the Third Plan period. During this period, 9 more Dispensaries were opened and the bed strength in the Homeo Medical College, Kurichi was increased from 50 to 100. At the end of Third Plan there were 14 Homeo Dispensaries and one Homeo Hospital in the State.

56. The homeo Dispensary at Trivandrum is proposed to be upgraded into a Hospital. Necessary provision has been made to complete the construction works of the building for the hospital. Provision is also made for the purchase of equipments. Grants to deserving private Homoeo Colleges will be continued. It has been proposed to open a few more hospitals and Homoeo Dispensaries. Provision has also been made for the appointment of additional staff for the Office of the Assistant Director (Homoeo).

57. Provision has been made to complete the buildings for Ayurvedic hospitals at Alleppey and Nedumangad during the Fourth Plan. Construction work of the building for upgrading the Ayurvedic Hospital at Cheruthuruthy into a model institution for special

forms of treatment, is proposed to be completed. Also provision has been made to equip this hospital for accommodating 50 paying patients and providing additional staff.

58. It has also been proposed to establish a few more Ayurvedic Hospitals, and Dispensaries and Sidha Dispensaries during the Fourth Plan. Provision has also been made to increase the bed strength in some of the Government Ayurvedic Hospitals. Construction of buildings for some of the existing Ayurvedic Hospitals and Dispensaries will be taken up during the Fourth Plan. Award of grants to cultivators of medicinal plants will also be continued.

HEALTH

Scheme-wise details of Fourth Plan Outlay

(Rs. in lakhs)			
Sl. No.	Name of Scheme	State Plan Outlay	Central Sector
(1)	(2)	(3)	(4)
MEDICAL EDUCATION & RESEARCH			
Medical College, Trivandrum			
<i>Continuing Schemes</i>			
1	Development of undergraduate medical education	2.50	
2	Development of post-graduate medical education		13.00
3	Development of Dental education	..	5.00
4	Institution of Physical Medicine and Rehabilitation	6.00	..
5	Organisation of Specialities in the Hospitals	8.00	..
6	Expansion of Hospitals, Service, Drugs, Social Welfare Departments	7.50	
7	Provision for amenities to students, staff and patients etc.	3.00	..
8	Cancer Unit	3.50	..
9	Training of Physiotherapists, Special therapists, Medical record Librarians, Hospital administration, X-Ray Technicians etc.	..	17.00
Total		30.50	35.00

(1)	(2)	(3)	(4)
MEDICAL COLLEGE, KOTTAYAM			
Spill-over Schemes		29.00	..
<i>Continuing Schemes</i>			
1 Medical College building proper including library, animal house, common room etc.		20.00	..
2 Medical College Hospital		14.00	..
3 Isolation hospital		1.40	..
4 Hostels for men and women		3.50	..
5 Stadium including Playground etc.		0.70	..
6 Co-operative Store		1.40	..
7 Water Supply and disposal plant including drainage		3.50	..
8 Residential quarters		3.00	..
9 Additional Staff		5.00	..
10 Equipments etc.		15.00	..
<i>New Schemes</i>			
1 Cancer Unit		3.50	..
Total		100.00	..
MEDICAL COLLEGE, CALICUT			
<i>Continuing Schemes</i>			
1 Construction of Buildings, purchase of equipments, additional staff etc.		59.90	..
<i>New Schemes</i>			
1 Cancer Unit		3.50	..
Total		63.40	..
MEDICAL COLLEGE, ALLEPPEY			
<i>Spill-over Schemes</i>		24.00	..
Total		24.00	..
Total—(Medical Education and Research)		217.90	35.00

(1)	(2)	(3)	(4)
CONTROL OF COMMUNICABLE DISEASES			
<i>Spill-over Schemes</i>			
1	Reconstructive Surgery	..	2.00
<i>Continuing Schemes</i>			
1	Bureau of Epidemiology (for Small pox and Malaria Eradication and Cholera Control)	..	30.00
2	T. B. Clinics and Hospitals	..	25.00
3	T. B. Isolation Beds	..	15.00
4	Supply of drugs for T. B.	..	12.00
5	S. E. T. Centres	..	10.00
6	Improvements to Leprosy Hospitals	..	5.00
7	Rehabilitation of Leprosy patients	..	1.50
8	N. F. C. P.	..	65.29
9	Trachoma Control	..	6.00
<i>New Schemes</i>			
1	V. D. Clinics	..	10.00
Total—Control of Communicable diseases		..	181.79
TRAINING SCHEMES			
<i>Spill-over Schemes</i>			
1	Orientation Training Centre	4.00	..
<i>Continuing Schemes</i>			
1	Training of General Nurses	35.00	..
2	Training of non-medical leprosy assistants	0.50	..
3	Training of Doctors in the treatment of leprosy	0.50	..
4	Training of Doctors in V. D.	0.50	..
5	Training of Doctors in D. P. H.	2.00	..
6	Public Health Training		
	(a) Training School		
	(b) Sanitary Instructors Training	5.00	

(1)	(2)	(3)	(4)
<i>New Schemes</i>			
1	Training of Public Health Nurses	2.00	..
2	Special training of Doctors in the treatment of T. B., Laboratory Services, Anaesthesia, Radiology, D.M.C.W. etc.	4.00	..
3	Training of Laboratory Technicians	1.00	..
Total—(Training Schemes)		54.50'	..

*Inclusive of Physiotherapy Unit and Nursing Education which were not given in the draft IVth Plan, but for which provision was included in 1969-70 and 1970-71.

MEDICAL CARE

Continuing Schemes

1	Primary Health Centres	110.00	..
2	Provision for insecticides in P. H. C.	6.00	..
3	Hospital beds	140.00	..
4	Construction of Paywards		
5	Revision of Staff pattern in Hospitals		
6	District Polyclinics	22.00	..
7	Emergency Medical Service in District Hospitals	15.00	..
8	Dental Services	25.00	..
9	Mental Health Services	33.00	..
10	Rehabilitation of handicapped	3.00	..
11	Paediatrics Units	12.00	..
12	Medical records Section	5.50	..
13	Modern equipments, X-Ray Units	30.00	..
14	Mobile Medical Units and New Dispensaries	14.00	..
15	Improvements to Hospital Staff quarters	26.00	..

New Schemes

1	Blood transfusion and Resuscitation Services	19.00	—
2	Specialist Service in peripheral Medical institutions	6.00	—
3	Central Sterile Supply	18.00	—
4	E. C. G. Units	3.50	—
5	Cardiac Units	33.00	..

Total—(Medical Care)

521.00

..

(1)	(2)	(3)	(4)
OTHER HEALTH SERVICES			
<i>Continuing Schemes</i>			
1	Health Organisation	3.00	..
2	Public Health Laboratory, Trivandrum, and Regional Public Health Laboratories	32.00	..
3	Nutrition	7.00	..
4	Government Analyst Laboratories	7.00	..
5	Organisation of Exhibition Units	1.80	..
6	Advance Training in Health Education	0.70	..
7	Educational Aids and Equipments	3.35	..
8	Technical Libraries	2.00	..
9	Improvements to Medical Stores, Manufacturing Section	6.00	..
10	Health Transport	1.00	..
11	Instrument Repairing Wing	0.20	..
12	Tripple immunisation and mass Phylaxis	3.00	..
13	Statistics	1.75	..
14	Chemical Examination Laboratories	10.00	..
<i>New Schemes</i>			
1	Students Health Programme	7.50	..
2	Building for State Health Education Bureau	2.50	..
3	Health Equipments Managements Organisation	5.00	..
4	Co-operative Medical Institutions	5.00	..
5	Group Practice assistance	1.75	..
6	Individual practice	5.25	..
7	Study of morbidity pattern	3.50	..
8	Health Home in Panchayats	4.10	..
9	Pre-school feeding	40.00	..
10	Sample Registration	1.60	..
11	Model Registration P. H. C.	0.30	..
12	Mechanical Equipment for Vital Statistics Computation	1.00	..
..	Total—(Other Health Services)	156.30	..
FAMILY PLANNING			
1	Family Planning	..	1278.00

(1)	(2)	(3)	(4)
DRUGS CONTROL			
1	Drugs Control	12.30	
INDIGENOUS SYSTEM OF MEDICINES			
<i>Continuing Schemes</i>			
1	Completion of buildings to Ayurveda Hospitals at Alleppey & Nedumangad	2.00	
2	Completion of building for upgrading the homeo dispensary, Trivandrum	2.00	
3	Completion of construction of building for upgrading the Ayurveda hospital, Cheruthuruthy into a model institution, for special forms of treatment, for equipping the Hospital and also for additional Staff	3.00	
4	For continuance of award of grant to private homeo colleges	1.00	
5	For continuance of award of grant to deserving cultivators of medicinal plants	1.00	
6	Vishavaidya Diploma Course	1.00	
7	Pharmacognosy	1.50	
Total		11.50	
<i>New Schemes</i>			
1	Opening of Ayurvedic (including Sidha) Hospitals & Dispensaries	45.00	
2	Opening of Homeo Hospitals and Dispensaries	5.00	
3	Increasing bed strength in the existing Ayurveda Hospitals	3.00	
4	Construction of buildings to Ayurveda Hospitals & Dispensaries	2.00	
5	Additional Staff for the Office of the Assistant Director (Homeo)	1.00	
6	Ayurveda College, Trivandrum	6.50	
7	Construction of Staff Quarters & Ladies Hostel, Ayurveda College, Trivandrum	7.00	
8	Publication Division, do.	2.00	
9	Ayurveda College, Trippunithura	5.00	
Total—(Indigenous Medicine)		88.00	
GRAND TOTAL		1050.00	1494.79

6.5 WATER SUPPLY (URBAN AND RURAL)

Drinking water scarcity in Kerala is as acute as in other parts of India. In spite of rich rainfall, the State suffers shortage of drinking water in coastal areas due to the brackishness of the water from various sources of supply. In the highlands, the surface water is very low so that dug wells have to be taken very deep through hard formations. According to the National Water Supply and Sanitation Committee Report (1961), Kerala ranks low in respect of Urban Water Supply and Urban Sewerage. Only 24% of the urban population enjoy adequate water supply while 18% have inadequate water supply and 58% with no water supply at all. Similarly, 93% of the urban population in Kerala have no sewerage against a corresponding figure of 68% for the whole of India.

2. During the previous plans, water supply and sewerage were not given the priority they deserved. Water supply and sewerage have ceased to be luxuries and are essential ingredients of a decent environment necessary for the health of the community. The incidence of 50 to 60% of the diseases in the State can be ascribed to unprotected water supply and sanitation. The huge amount of money spent on curative and prophylactic medicines, vaccines and sera, could advantageously be offset by an initial investment on improving the environmental conditions by providing protected water supply and sewerage. The Fourth Plan proposals have been formulated against this background.

3. In regard to urban water supply, all the spill-over schemes will be taken up and completed during the Fourth Plan period. The combined water supply and sewerage scheme for Greater-Cochin will also be taken up. Provision has been made for taking up new schemes for Alleppey (Augmentation), Kunnamkulam- Guruvayoor-Chowghat, Changanacherry-Thiruvalla, Irinjalakudi, Kasargod, Moovattupuzha, Attingal and Neyyattinkara. Calicut urban sewerage scheme will also be taken up during the plan period. The population covered by urban water supply schemes increased from 1 million in 1968-69 to 1.40 million in 1973-74. The possibility of finding funds from various sources such as L.I.C., I.D.A., I.M.F. etc., by the Municipalities and Corporations for financing the projects will be explored. Provision has also been made for spill-over and new schemes for Rural Water Supply. The Population benefitted by rural water supply schemes is estimated to be 50 lakhs in 1973-74.

SCHEMEWISE DETAILS OF FOURTH PLAN OUTLAY 1969-74

Water Supply & Sanitation

(Rs. in lakhs)

Sl. No.	Name of Scheme	State Plan outlay	Central Sector
<i>Continuing/Spill-over Schemes :</i>			
1	Trivandrum Water Supply Scheme (Augmentation)	150.00	..
2	Kozhikode Water Supply Scheme (Augmentation)	98.00	..
3	Cannanore-Tellicherry Water Supply Scheme	60.00	..
4	Kayamkulam Water Supply Scheme	15.00	..
5	Shertallai Water Supply Scheme	9.00	..
6	Badagara Water Supply Scheme	20.00	..
7	Perumbavoor Water Supply Scheme	3.00	..
8	Vaikom Water Supply Scheme	11.00	..
9	Kuttanad Water Supply Scheme	50.00	..
10	Water Pollution Control Board	15.00	..
11	Formation of Water Supply and Sewerage Board	25.00	..
	Total	456.00	
12	Water Supply and Sewerage to Cochin Development area	395.00	..
<i>Water Supply-New Schemes</i>			
13	Neyyattinkara W. S. Scheme	5.00	..
14	Attingal W. S. Scheme	5.00	..
15	Moovattupuzha W.S. Scheme	5.00	..
16	Comprehensive Scheme to Kunnamkulam, Guruvayoor and Chowghat	15.00	..
17	Alleppey W.S. Scheme (Augmentation)	10.00	..
18	Thiruvalla W.S. Scheme	1.00	..

<i>Sl. No.</i>	<i>Name of Scheme</i>	<i>State Plan Outlay</i>	<i>Central Sector</i>
19	Changanacherry W. S. Scheme	1.00	..
20	Irinjalakuda W.S. Scheme	1.00	..
21	Kasargode W.S. Scheme	1.00	..
	Total	44.00	..
<i>Rural Water Supply Scheme :</i>			
22	Spill over	175.00	..
23	New Schemes	75.00	..
	Total	250.00	..
<i>Drainage Scheme</i>			
24	Spill over (Trivandrum drainage)	20.00	..
25	New Schemes (Calicut Drainage Scheme)	10.00	..
	Total	30.00	
26	Open Draw Wells	50.00	
	Grand Total	1225.00	..

6.6 HOUSING

The housing programmes started functioning during the First Five Year Plan. Among the various schemes the low-income group housing scheme proved to be very popular. Under State sector an amount of Rs. 182.27 lakhs was expended on housing schemes during the Third Plan as against Rs. 157.39 lakhs during the Second Plan period. During the Fourth Five Year Plan the schemes already in operation will be continued and fresh schemes taken up. The individual schemes are the following.

1. *Subsidised Industrial Housing Scheme:*

The scheme contemplates financial assistance by way of grants and loan to statutory housing boards, municipalities, co-operative societies of eligible workers and employees and also to employers to provide houses to the industrial workers.

2. *Housing for agricultural labourers.*

The scheme is intended to give financial assistance to poor agricultural labourers for acquisition of land for constructing houses of their own and also for the provision of civic amenities.

3. *Settlement of landless agricultural labourers in Government Poramboke.*

The Schemes envisages settlement of landless agricultural families on available Government Poramboke lands. Under the scheme a family will get upto a maximum of 4 acres of Government land on assignment with a financial assistance of Rs. 1000 for reclamation of land & initial settlement expenses.

4. *Housing Schemes financed from L.I.C. funds:*

(a) *Low Income Group Housing Scheme:*—The object of the scheme is to assist people in the low-income group by way of long-term loans to construct houses of their own.

(b) *Village Housing Project Scheme.*—This is a scheme evolved by the Government of India for developing the rural areas. According to this scheme financial assistance is provided to the residents of selected villages for house construction. Priority will be given to the landless agricultural labourers.

(c) *Middle Income Group Housing Scheme.*—This scheme is intended to give loans to individuals whose annual income is between Rs. 7201 to Rs. 15000. The maximum loan admissible is Rs. 25,000 per house. Loans are also granted to Co-operative Housing Societies, City Improvement Trust etc.

(d) *Rental Housing Scheme.*—Tenements will be constructed by the State Government for providing houses to the economically weaker sections of the Community viz. to persons whose annual income does not exceed Rs. 3,000.

(c) *Land acquisition and Development.*—This scheme is intended to help to solve the problem of housing and slum clearance by the provision of loan finance to State Government for large scale acquisition and development of land in selected places.

5. *Plantation Labour Housing Scheme.*

Provision is included in the Fourth Plan to complete the spill over work relating to this scheme.

6. *Poor Housing Scheme.*

The scheme is intended to provide houses and house-sites to the poor, houseless and landless people by giving them interest-free long term loans repayable within 25 years. Provision is made in the Fourth Plan to take up the spillover works and for the rehabilitation of Kudikidappu tenants from the lands acquired for the ship building yard at Cochin.

7. *Housing Scheme for Employees of Local bodies.*

The scheme contemplates the issue of loans by the Government to local bodies for construction of houses for their low paid staff.

8. *Co-operative Housing Scheme:*

The object of the scheme is to provide loans to the Urban and Rural Co-operative Societies for construction of houses in the urban and rural areas.

9. *Housing Scheme for Weaker Sections:*

Financial assistance will be given by the Government for construction of houses to the weaker sections of the community.

10. *Housing Board:*

The Housing Board through which the expenditure for the various housing schemes will be channelled would be able to solve most of the existing bottlenecks in the implementation of the various housing schemes.

HOUSING

Schemewise details of Fourth Plan Outlay 1969-74*(Rs. in lakhs)*

<i>Sl. No.</i>	<i>Name of Scheme</i>	<i>State Plan Outlay</i>	<i>Central Sector outlay</i>
1	Subsidised Industrial Housing Scheme	10.00	..
2	Housing for agricultura labourers	20.00	..
3	Settlement of landless agricultural labourers in Government poramboke	30.00	..
4	Housing Schemes financed from L.I.C. funds:—		
	(a) Low Income Group Housing Scheme	50.00	..
	(b) Village Housing Project Scheme	25.00	..
	(c) Middle Income Group Housing Scheme	41.50	..
	(d) Rental Housing Scheme	10.00	..
	(e) Land Acquisition and Development	20.00	..
5	Plantation Labour Housing Scheme	5.00	..
6	Poor Housing Scheme	5.00	..
7	Housing Scheme for Employees of Local bodies	0.50	23.00
8	Co-operative Housing Scheme	5.00	..
9	Housing Scheme for Weaker Sections of the Community	5.00	..
10	Housing Board	3.00	..
	Total	230.00	23.00

6.7 URBAN DEVELOPMENT

Town Improvement:

The scheme envisages financial assistance to the Municipalities and Municipal Corporations for remunerative works such as construction and improvement of markets, slaughter houses, bus stands etc., for which the Municipalities/Corporations may levy fees under the provisions of the statutes. A few pilot projects for organisation of leisure time cultural activities, physical improvement and amenities, welfare activities etc., will also be started in the major towns and cities.

City Improvement Trust, Trivandrum.

2. The provision is for giving loans and grants to the City Improvement Trust, Trivandrum for developing the city on modern lines. The loans are intended for the implementation of the sanctioned schemes/projects undertaken by the Trust and grants for meeting the revenue deficit with establishment charges of the Trust.

Master Plans and Regional Plans

3. The preparation of regional plans for Trivandrum, Cochin, Calicut and Palghat would be completed during the plan period. A provision of Rs. 25 lakhs has been earmarked for the preparation of regional plans during the Fourth Plan period.

Ernakulam-Cochin Town Planning Trust:

4. The provision is for the payment of loans and grants to the Trust for the implementation of the Greater Cochin regional plan.

Calicut Joint Town Planning Committee

5. The provision is meant for providing financial assistance to the Committee for the implementation of the Calicut regional plan prepared by the Town Planning Department.

Slum Clearance

6. The scheme is meant for eradication of slums in urban areas and to provide the slum-dwellers with better housing facilities. Financial assistance will be provided to the Municipalities and Corporations by way of loans and grants for construction of tenements. It is estimated that 375 tenements will be constructed during the Fourth Plan period.

URBAN DEVELOPMENT

Scheme-wise details of Fourth Plan Outlay 1969-74*(Rs. in lakhs)*

<i>Sl. No.</i>	<i>Name of Scheme</i>	<i>State Plan outlay</i>	<i>Central sector outlay</i>
(1)	(2)	(3)	(4)
<i>Continuing Schemes</i>			
1	Town Improvement	15.00	..
2	City Improvement Trust, Trivandrum	24.00	..
3	Preparation of Regional Plans	25.00	..
4	Ernakulam-Cochin Town Planning Trust	50.00	..
5	Calicut Joint Town Planning Committee	20.00	..
6	Slum Clearance	29.75	..
	Total	163.75	..

6.8 WELFARE OF BACKWARD CLASSES

Development programmes for the welfare of backward classes are mainly intended to supplement benefits accruing from programmes of development in different fields. The Plan outlay on the Welfare of Backward Classes is distributed mainly among three items viz; education, economic uplift and health, housing and other schemes, of which education occupies the first priority. An account of the schemes proposed to be implemented during the Fourth Plan Period is given below:—

A. Welfare of Scheduled Tribes

I. EDUCATION

1. *Scholarships and Stipends:*

This is a continuing scheme intended for giving lumpsum grant and stipend to pre-matric students for meeting the expenditure towards books, stationery articles and clothes. It is estimated that the number of students benefited by scholarships and stipend would increase from 4729 in 1968-69 to 8000 in 1973-74.

Residential Basic Schools

In order to promote education among scheduled tribes, it is proposed to start 12 more Government Residential Basic Schools during the Fourth Plan period. Provision is included for starting schools for tribal girls.

3. *Boarding Grants:*

It is proposed to give boarding grants to students in the subsidised hostels

4. *Re-imbusement of Tution Fees:*

Provision has been made in the Fourth Plan for reimbursing the expenditure incurred by the Education Department on account of the grant of full fee concessions to the tribal students in non-Government schools.

5. *Hostels:*

In order to provide lodging facilities to tribal students in secondary schools who are away from their native villages it is proposed to start four more hostels during the Fourth Plan period.

II. Economic Uplift

1. *Subsidy to technically trained persons:*

This scheme envisages to provide subsidy at the rate not exceeding Rs. 500 each to the technically trained persons to enable them to settle themselves in trade or occupation.

2. *Model Welfare Training Centres:*

In order to provide work to trained personnel outside regular working hours it is proposed to start a few Model Welfare Training Centres having modern equipments, electric connection etc.

3. *Other Schemes:*

Provision is included in the Fourth Plan to grant managerial expenses to Co-operative Societies. Forest Labourers' Co-operative Societies will be started to do away with unscrupulous money lenders and to give the tribals necessary work. For the uplift of the tribals it is proposed to start one Farming Society during the Plan Period. Welfare measures will be undertaken for the development of tribal pockets.

III. Health, Housing and other schemes

Since the medical facilities offered by Government under normal programmes are beyond the reach of hill tribes, the Harijan Welfare Department is running mobile medical units and dispensaries of its own. Three more Ayurvedic dispensaries will be started during the plan period. It is proposed to sink a number of wells in tribal areas to provide drinking water facilities to the tribes. Protected water supply schemes will also be introduced. A scheme to impart training to Auxiliary Nurse-midwifery course to tribal women is also contemplated.

Grants are being paid to the tribal people for constructing houses of their own. The number of houses are estimated to increase from 82 to 533 during the plan period. Another scheme proposed is to effect improvement to tribal settlements and also to give incentives to colonists for developing their agricultural activities and for starting nursery schools. A Pilot Project for land reclamation and settlement of tribes is also proposed to be implemented. This is intended for settlement of Scheduled Tribes in forest lands.

B. Welfare of Scheduled Castes

I. EDUCATION

The scheme for the issue of scholarships and stipends, tuition fee, concessions, boarding grants etc. will be continued during the Fourth Plan. The number of students benefited by scholarships and stipends is estimated to go up from 47661 in 1968-69 to 115000 in 1973-74. Apart from these the following schemes are also contemplated.

1. Cosmopolitan Hostels:

Three new hostels will be constructed and additions will be made to the existing hostels.

2. Welfare Hostels:

In order to encourage scheduled castes to send their children to secondary schools, separate hostels for boys and girls will be constructed during the Fourth Plan Period. Altogether 13 hostels are expected to come up during the five year period.

II ECONOMIC UPLIFT

It is proposed to give subsidy to technically trained persons to enable them to settle themselves in the trade or occupation in which they are proficient. Provision is made for streamlining Industrial Training Centres and to start production-cum-training Centres and Multipurpose Co-operative Societies. Ten more industrial training centres will be started during the Fourth Plan period.

A scheme for the issue of grants to the scheduled caste families for the purchase of agricultural implements, seeds, livestock, screwpine etc. is also proposed.

III. HEALTH, HOUSING AND OTHER SCHEMES

The scheme for sinking of wells will be continued during the Fourth Plan. House sites and housing grants will be provided to poor families and improvements will be effected in the existing colonies. The number of houses constructed is estimated to increase to 1000 by the end of 1973-74. It is proposed to give interest free loans for the construction of houses to those scheduled castes who possess land of their own and who have the capacity to repay the amount. Grants will be given to tide over the hard circumstances arising out of inter-caste marriages.

Administration: For the effective implementation of Plan schemes it is proposed to appoint District Welfare Officers equal in status to Deputy Collectors of the Revenue Department.

C. Other Backward classes

This class includes not only backward classes, but also communities who are usually treated on a par with scheduled castes/scheduled tribes, but who are not actually notified so. It is proposed to give educational concessions to these people during the Fourth Plan. The number of students getting educational concessions will go up from 36277 in 1968-69 to 11000 in 1973-74. Boarding grants will also be given to the Backward Community students in the subsidised hostels.

WELFARE OF BACKWARD CLASSES

Scheme-wise details of Fourth Plan Outlay 1969-74

Sl. No.	Name of Scheme	(Rs. in lakhs)	
		State Plan	Central Sector
(1)	(2)	(3)	(4)

State Plan Schemes:

(A) Welfare of Scheduled Tribes

(a) Continuing/Spill over

1	Scholarships and Stipends	2.00	..
2	Government Residential Basic Schools	8.00	..
3	Boarding grants	0.50	..
4	Reimbursement of tuition fees	0.50	..
5	Welfare hostels	2.40	..
6	Co-operative Societies	0.25	0.18
7	Welfare of tribals living in pockets	2.00	..
8	Water Supply	5.00	..
9	Ayurvedic dispensaries	1.90	..
10	Midwifery training centres	1.50	..
11	Housing—construction of houses	8.00	..

(B) Welfare of Scheduled Castes:

1	Scholarships and stipends	24.75	..
2	Boarding grants	1.50	..
3	Reimbursement of tuition fees	8.20	..
4	Cosmopolitan hostels	9.00	..

(1)	(2)	(3)	(4)
5	Welfare hostels	7.00	..
6	Industrial training centres	2.50	..
7	Co-operative Societies	1.25	1.87
8	Water Supply Wells	5.00	..
9	Acquisition of house sites	2.50	..
10	Housing —construction of houses	14.00	..
11	Improvements to Colonies	13.30	..
12	Interest-free loan for construction of houses	2.10	..
13	Inter-caste marriage	1.00	..
(C) Welfare of other Backward Classes			
1	Educational concessions	12.00	..
2	Boarding grants	1.00	..
(b) New Schemes			
(A) Welfare of Scheduled Tribes			
1	Supply of mid-day meals	2.40	..
2	Subsidy to technically trained persons	0.75	..
3	Grants for purchase of agricultural implements	1.60	..
4	Development of tribal settlements	3.00	..
5	Pilot project for land reclamation	1.50	..
6	Forest Labourers Co-operative society	..	2.25
(B) Welfare of Scheduled Castes			
1	Subsidy to technically trained hands	2.50	..
2	Grant for purchase of agricultural implements	3.00	..
3	Statistical co-ordination and evaluation cell	1.80	..
4	Administration	1.50	..
Total		150.20	4.30

6.9 SOCIAL WELFARE

Social welfare services are meant for the uplift of the vulnerable sections of the community such as the physically handicapped, destitute, maladjusted individuals and groups etc., through policies aiming at enlarging economic opportunities and creating better social conditions. These services consist in an organised and sustained effort for the education, welfare and rehabilitation of those sections of the community.

2. A review of the development of Social Welfare Services during the past years shows disappointing results and the programmes had many weaknesses. Many social welfare programmes were deferred due to paucity of funds. Social welfare expenditure in many cases presents an investment since through preventive, rehabilitative and curative programmes, the physically and socially handicapped are enabled to contribute to the economy of the country and participate in unison with the life of the community.

Hostel for working women:

3. It is proposed to start three more hostels, during the plan period. These hostels are meant to give accommodation and amenities to low-paid women-employees of both public and private undertakings.

Grant-in-aid to Voluntary Organisations:—

4. Voluntary organisations have very much to do in the emancipation of physically and mentally deficient. Many of these are charitable institutions and require aid from outside. It is proposed to give aid to really useful institutions and organisations and a sum of Rs. 2.50 lakhs is provided for the purpose.

Aid to Infirmeries:

5. It is proposed to give an amount of Rs. 1.75 lakhs by way of aid to voluntary organisations and private institutions for running infirmaries.

Training-cum production Centres attached to Abalamandirs.

6. There are 9 Abalamandirs in the State. At present there is no programme to give the inmates any satisfactory vocation. The expert craft teachers absorbed in Government Services consequent to the abolition of the Social Welfare Board may be employed usefully in these Abalamandirs so that the inmates can be trained in useful trades like book binding, paper making, match manufacturing etc.

Home for mentally deficient Children and assistance to Physically handicapped children:

7. There is a home for the mentally deficient children located at Nanthancode in Trivandrum. Mentally deficient like idiots, imbeciles morons, etc. are admitted in this Centre. There are a large number of

such children who require rehabilitation and treatment. This home will have to be developed substantially. A psychiatric research unit will have to be attached to this centre. Along with treatment of such cases, facilities for providing artificial limbs etc. for physically handicapped children may also be added. An amount of Rs. 3 lakhs is provided for this scheme.

Training -cum-work centre:

In the after-care homes, there are a number of unemployed youth, some of whom are technically qualified. As a measure of rehabilitation of these inmates and others there, it is proposed to start a training cum-work centre attached to the Central Prison, Trivandrum. Rs. 1 lakh is provided for this.

Social defence:

It is proposed to start three family guidance and counselling agencies under qualified social workers. The idea is to reform the existing 'Abalamandirs'. At present, there is no programme to provide the inmates of the 'abalamandirs' with work. Case work and counselling process are not practiced anywhere in these institutions. The purpose of the Scheme is to educate the inmates and find suitable placements for them.

Welfare of the handicapped:

There is neither any governmental agency nor provision to give equipments and aids to enable the handicapped persons to lead a useful life. It is also suggested to give loans and grants to enable the handicapped groups to pursue vocations suited to their individual capacities. Provision is also made for starting a social welfare rehabilitation pilot project for the handicapped.

Public Co-operation:

Public Co-operation is necessary for the success of social welfare activities of the Government. An amount of Rs. 1.00 lakh is provided for activities ensuring public co-operation.

Schemewise details of Fourth Plan Outlay 1969-74*(Rs. in lakhs)*

<i>Sl. No.</i>	<i>Name of Scheme</i>	<i>State Plan</i>	<i>Central Sector</i>
(1)	(2)	(3)	(4)
1	Home for healthy children of lepers	0.05	
2	Shelter for waifs and strays	0.25	
3	Hostel for working class women	2.40	
4	Grant-in-aid to voluntary organisations	2.50	
5	Grant-in-aid for running destitute homes for women	0.25	
6	Employment bureau for handicapped	0.05	
7	Expansion of probation and follow up services	0.50	
8	Aid to infirmaries	1.75	
9.	Remand homes with seats for Juvenile Court	0.30	
10.	Certified school	0.90	
11.	Eradication of beggary—Pilot project	0.20	
12.	Development of schools for handicapped	1.00	
13.	After care homes for adolescents	0.20	
14.	Improvements to borstal school	0.40	
15.	Financial assistance to voluntary organisations for running hostels for working class men/women	0.55	
16.	Training-cum production centres attached to 'abalamandirs'	1.50	
17.	Development of home for the mentally deficient children and assistance to physically handicapped	3.00	
18.	Training-cum work centre	1.00	
19.	Expansion and improvements to rescue homes	1.00	
20.	Child Welfare	7.00	
21.	Women Welfare	5.00	
22.	Social Welfare	5.00	
23.	Welfare of the handicapped	15.00	
24.	Public Co-operation	1.00	
25.	Training, research and administration	1.00	
	Total	51.80	

6.10 CRAFTSMEN TRAINING AND LABOUR WELFARE

At present there are 36 Industrial Training Institutes with an intake capacity of 5360, working in the State both in the public and private sectors combined. A provision of Rs. 57 lakhs has been made for the construction of buildings, workshops, sheds, administrative blocks, store rooms etc. Instructors recruited will be trained. The National Apprenticeship Training Scheme, evening and part time classes scheme etc., will have to be continued. The administrative organisation will also be strengthened.

Employment and manpower Scheme:

2. Employment Service seeks to promote the best possible co-ordination between the manpower requirements and resources of the country. The scheme proposed are for the expansion and strengthening of Employment Exchanges. Employment market information unit will be expanded and all its work intensified. A provision of Rs. 3.00 lakhs is made for the purpose.

Employees State Insurance Scheme:

3. The Employees State Insurance Scheme aims chiefly at giving medical benefits to the labourers. It is proposed to bring out all the factories registered under Factories Act of 1948 and shops and commercial establishments including Transport Companies under the E. S. I. Scheme. Government officials will also covered by health insurance scheme. An amount of Rs. 30 lakhs is provided.

Craftsmen Training & Labour Welfare Scheme-wise Details

		(Rs. in lakhs)
Sl. No.	Name of Scheme	State Plan Outlay
1.	<i>Craftsmen Training Scheme</i>	
(i)	Training of craftsmen in I. T. Is.	30.00
(ii)	Conversion of I. T. Is. into production-cum-training centres	22.00
(iii)	Apprenticeship training.	0.80
(iv)	Part-time classes for industrial workers	0.20
(v)	Starting of new I. T. Is. at Malapuram & Calicut	4.00
Total		57.00

	<i>Plan Outlay</i>
2. Employment and manpower Scheme	
(i) Expansion of Employment Exchanges	2.53
(ii) Expansion of Employment Market Information unit	0.47
Total	3.00
3. Employees State Insurance Scheme	30.00
Grand Total	90.00

MISCELLANEOUS

7.1 STATISTICS

1. The essential task of planning would be a continuous balancing of demand and supply of machinery, materials and labour. Hence scientific planning must take care of both short period balances by formulating current plans and long-period balances by formulating perspective plans.

2. Any systematic planning requires a considerable body of information. In the context of increasing importance being attached to scientific planning, the machinery for the collection, compilation and analysis of statistical data has a key role to perform. With the setting up of the State Planning Board for the formulation and evaluation of development plans, it has become necessary to re-orient the work of the Bureau of Economics and Statistics to suit the requirements of planning.

3. There have been efforts to build up the statistical machinery in the State particularly during the Second and Third Plan periods. When the Department of Statistics was organised in 1954 effort was made to combine in its activities work relating to agricultural and socio-economic Surveys and administrative statistics. The Department also assisted the Planning Department in the Secretariat in the formulation of the Five Year Plans. During the Second Five Year Plan, District Statistical Offices were established in all the Districts to co-ordinate the statistical activities in the District and to supervise the work of the reporting agencies. A small planning cell also was created in the Department. The creation of the Bureau of Economic Studies in 1958 was with the object of having plan oriented research studies utilising the service of the Department of Statistics particularly

in respect of current statistical information. In the Third Five Year Plan the statistical machinery was strengthened by providing additional staff in the Department of Statistics. Small statistical cells were created in other Departments also as part of an effort to improve the quality and timeliness of administrative statistics which were bye-products of the functioning of the Departments.

4. It is necessary that during the Fourth Five Year Plan the quality of the available statistics be improved and the gaps in the availability of statistics removed to the extent possible.

5. It is also necessary to make arrangements for proper co-ordination and effective technical control in regard to the working of the statistical cells in other Government Departments. Some of the existing units stand in need of strengthening also.

6. Provision has been made for training programmes for the various categories of Officers in the Bureau of Economics and Statistics and the Planning Board and in the statistical cells in other Departments. In-service training and training in other recognised institutions are also planned for.

STATISTICS

Scheme-wise details of Plan Outlay

Sl. No.	Name of Scheme	(Rs. in lakhs)
		State Plan
1.	Survey of Wage Structure	1.00
2.	Housing Statistics	3.00
3.	Training of Statistical Personnel	1.00
4.	Strengthening of Industrial Statistical Unit	2.48
5.	Econometric Studies	1.06
6.	Resources Planning Unit	0.20
7.	Strengthening of State Income Unit	0.85
	<i>New Schemes</i>	
8.	Preparation of Statistics of Municipal towns, cities and District Statistical Hand Books	0.91
9.	Coordination of Official Statistics	1.00
10.	Mechanical Tabulation Unit	0.30
11.	Labour Statistics	0.20
Total		12.00

7.2 INFORMATION AND PUBLICITY

The Public Relations Department is not at present adequately equipped to meet the needs of a modern publicity organisation. The main purpose of publicity is to project the objectives and policies of the Government among the public by pressing into service all media for mass communication.

2. During the Fourth Five Year Plan period it is proposed to install community listening sets in the different Panchayats of the State. It is also proposed to establish a film producing unit to produce films to educate the public on the development activities taking place in our State. A Publication Division on the lines of the Publication Division at the Centre is considered absolutely essential for the Public Relations Department of the State. Visual publicity has been recognised as the most effective means of popularising the aims and achievements of the Five Year Plan and the policy and achievements of the State Government. It is proposed to organise an exhibition wing and to revitalise the functioning of the section. Field publicity organisation is also proposed to be strengthened. To add impetus to the cultural programmes, it has been decided to introduce new schemes like State Folk Art Festival, Drama Festival, Art Exhibition etc. It is also proposed to constitute a press facilities fund.

<i>Schemes</i>	<i>Rs. in lakhs</i>
1. Community Listening sets	0.50
2. Films & Cinema slides	4.50
3. Publicity materials	1.00
4. Exhibitions	4.50
5. Display advertisements	1.25
6. Field Publicity organisation	1.50
7. Song and drama	2.00
8. Photo publicity	1.10
9. Starting of Information Centres	0.05
10. Training of Field Publicity staff	0.50
11. Press tours	0.375
12. Strengthening of Information Services	0.10
13. Erection of Hoardings	0.01
14. Installation of Franking machine	0.025
15. Press Facilities fund	0.09
16. Installation of Teleprinter service	0.50
Total	18.00

7.3 EVALUATION

In all planned development many unknown factors have to be reckoned with. Understanding of the inter-action of different elements that enter into programmes which bear closely in the life of the people can be of material help in enhancing their contribution to the welfare of the community. It is of the almost importance that social and economic changes should be analysed objectively as they occur and the impact of economic development on different sectors observed, at first hand. This requires that the experience of planning agencies at various levels, the ideas of specialists in particular fields and the analysis of the economist and the Statistician should be brought to a common focus, not only for objective appraisal of what is being done but for evolving fresh approaches to practical problems and new lines of action. Thus evaluation has to be increasingly oriented towards studies of a selective and intensive type motivated by and leading to purposive action. In the first five year plan itself, it was recommended that systematic evaluation should become a normal administrative practice in all branches of public activity. An amount of Rs. 5.00 lakhs is provided for the strengthening of the Evaluation Unit.

7.4 OTHERS (PLAN ADMINISTRATION)

The formulation of plans and the evaluation of plan performance require the functioning of a suitable machinery at the State and at the District level. The formation of such a body has been recommended in the interim report of the Administrative Reforms Committee in the machinery of planning. The functions of the planning machinery are as follows:

- (i) Assessment of resources and formulation of plans for the most effective and balanced utilisation of those resources.
- (ii) Determination of plan priorities of the State within the priorities of the National Plan.
- (iii) Provision of assistance to District authorities in the preparation of the District Plans, with in the sphere in which such Planning is considered useful and feasible and the co-ordination of these plans with in the State Plan.
- (iv) Identification of the factors retarding economic and social development of the State and postulating the preconditions of successful plan implementation and
- (v) review of the implementation of plan programmes and the consequent adjustments in policies and measures as indicated in the review.

2. The State Planning Board was constituted in October 1967. A provision of Rs. 5 lakhs is provided for the Planning Board and a provision of 4 lakhs is made for the District Development Councils.

3. There is considerable difficulty now in getting matters printed in the Government Presses, Trivandrum as the volume of work has increased very much. Therefore it is proposed to expand the printing capacity of the press by purchasing additional machinery and materials at a cost of Rs. 5.00 lakhs.

<i>Sl. No.</i>	<i>Name of Schemes</i>	<i>State Plan Outlay</i>	<i>Central Sector</i>
1	State Planning Board	5.00	..
2	District Development Councils	4.00	..
3	Planning forums	1.00	..
4	Publication of District Plan	00.25	
5	Development of Government Central Press, Trivandrum and the Government Press, Shoranur	5.00	..
Total		15.25	



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